ORDER NO. GAD8609614C3

Service Manual

Portable Stereo Component System

Radio Cassette

RX-XE520F

(Black)

This is the Service Manual for the following areas.

[X] ···For Asia, Latin America, Middle East and Africa areas.

[XC] ···For Saudi Arabia.

RX-C300F MECHANISM SERIES

■ SPECIFICATIONS

Power Requirement:	AC; 110~127/200~220/230~250V, 50/60Hz
	Battery; 15V (Ten "D" Size Flashlight Batteries) (National UM-1 or equivalent)
	Car Battery; with optional car adaptor RP-9550
Power Consumption:	250W (AC only)
Power Output:	72W (36W×2)...THD 5% at 1kHz
	300W (150W×2)...PMPO
Speaker:	Woofer; 12×12cm PM Dynamic Speaker (6Ω)
	Squawker; 5cm PM Dynamic Speaker (6Ω)
	Tweeter; 3.5cm×2 PM DYNAMIC Speaker (6Ω×2)
Input:	MIX MIC/MIC; sensitivity 1mV/applicable microphone Impedance 200~600Ω, φ3.5
	LINE IN/CD; sensitivity 316mV/47kΩ over
	PHONO; sensitivity 4mV/47kΩ over
	DC IN; 12~15V
	ANNTENA & EARTH
Output:	LINE OUT; sensitivity 400mV/4.7kΩ under
	EXT. SP; 6~8Ω
	HEADPHONES; 8Ω, φ5.5
Dimendion:	Max. size
	System
	578(W)×335(H)×266(D)mm
	Tuner Amplifier
	241(W)×133(H)×266(D)mm
	Cassette Deck
	248(W)×134(H)×238(D)mm
	Speaker
	165(W)×266(H)×224(D)mm
Weight:	15.4kg without batteries

Radio Section:

Radio Frequency Range:	FM; 88~108MHz
	MW; 530~1605kHz
	SW1; 2.3~7.0MHz
	SW2; 7.0~22MHz
Intermediate Frequency:	FM; 10.7MHz
	AM (MW/SW1/SW2); 455kHz
Seisitivity:	FM; 1.8μV/50mW output (−3dB Limit sens.)
	MW; 126μV/m/50mW output
	SW1; 79μV/m/50mW output
	SW2; 16μV/50mW output

Tape Deck Section:	**TAPE 1**
Frequency Response:	40~15,000Hz (with Normal tape)
	40~16,000Hz (with CrO_2 tape)
	40~16,000Hz (with Metal tape)
Recording System:	AC bias, AC erase
Tape Speed:	4.8cm/S. ($1^7/_8$ ips)
Program Time:	1 hour with C-60 cassette tape
Track System:	4-track 2-channel stereo recording and playback

Tape Deck Section:	**TAPE 2**
Frequency Response:	40~15,000Hz (with Normal tape)
	40~16,000Hz (with CrO_2 tape)
	40~16,000Hz (with Metal tape)
Tape Speed:	4.8cm/S. ($1^7/_8$ ips)
Track System:	4-track 2-channel stereo recording and playback

Design and specifications are subject to change without notice.

National

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

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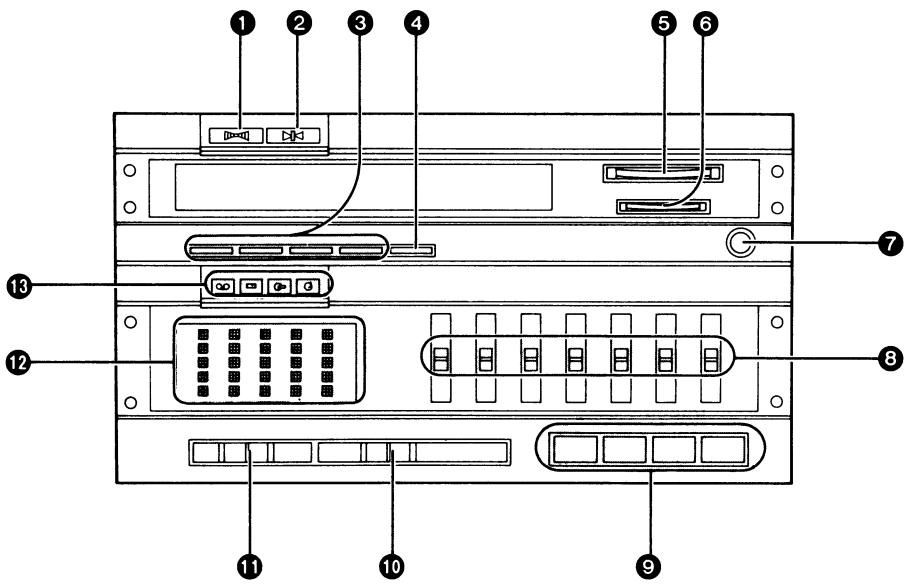
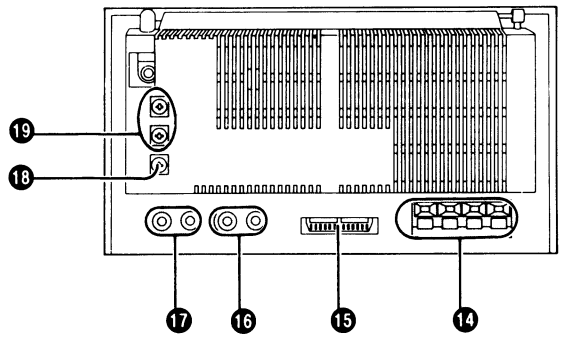
LOCATION OF CONTROLS AND COMPONENTS



Front Panel

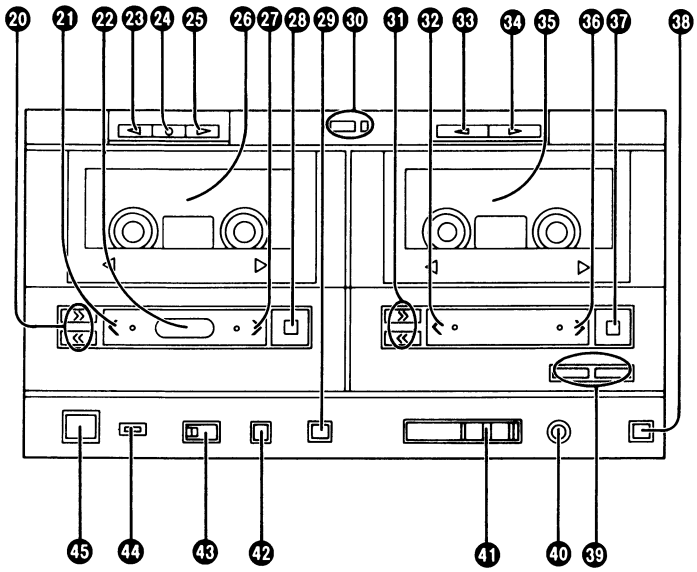
❶ FM Stereo Indicator (FM STEREO)
❷ Tuning Indicator (TUNING)
❸ Band Selector (BAND)
❹ FM Mode Selector (FM MODE)
❺ Tuning Control (TUNING)
❻ Fine Tuning Control (FINE TUNING)
❼ Headphones Jack (PHONES) 8Ω, φ5.5
When using the headphones, avoid listening to sound for a long period of time and avoid excessive volume levels, which may injure your ears.

❽ Graphic Equalizer Controls (GRAPHIC EQUALIZER)
❾ Function Selector (FUNCTION)
❿ Volume Control (VOLUME)
⓫ Balance Control (BALANCE)
⓬ Spectrum Analyzer (SPECTRUM ANALYZER)
⓭ Function Indicators (TAPE • TUNER • CD/LINE • PHONO)



Rear Panel

⑭ **Speaker Terminals (SPEAKER IMP 6~8Ω)**
⑮ **Female Connector**
⑯ **CD/Line Input Jacks (CD/LINE IN) 316 mV/47 kΩ**
⑰ **Phono Jacks (PHONO) 4 mV/47 kΩ**
⑱ **Phono Earth Terminal (PHONO EARTH)**
⑲ **External Antenna Terminals (FM ANT/SW ANT)**



*"Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.
Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

Notes:
- Always be sure to completely stop all operation before removing or inserting a cassette into the unit.
- When pressing the tape operation buttons, always press near the operating mark position.

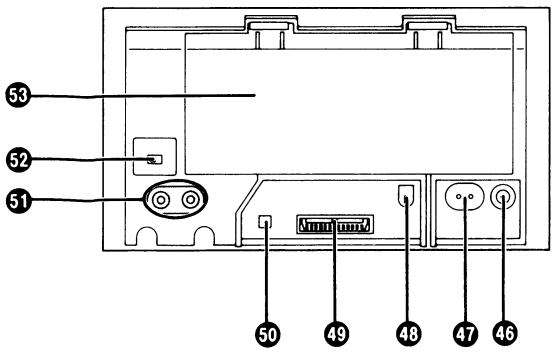
TAPE 1

⑳ **Fast Buttons (≫ • ≪)**
㉑ **Playback Button (〈 REV)**
㉒ **Record Stand By Button (● REC STAND BY)**
㉓ **Reverse Indicator (REV)**
㉔ **Recording Indicator (REC)**
㉕ **Forward Indicator (FWD)**
㉖ **Cassette Compartment**
㉗ **Playback Button (FWD 〉)**
㉘ **Stop Button (□ STOP)**
㉙ **Eject Button (▲ EJECT)**
㉚ **Tape 1 Counter and Reset Button (TAPE 1 COUNTER)**

TAPE 2

㉛ **Fast Buttons (≫ • ≪)**
㉜ **Playback Button (〈 REV)**
㉝ **Reverse Indicator (REV)**
㉞ **Forward Indicator (FWD)**
㉟ **Cassette Compartment**
㊱ **Playback Button (FWD 〉)**
㊲ **Stop Button (□ STOP/DUBBING STOP)**
㊳ **Eject Button (▲ EJECT)**

㊴ **One Touch Dubbing Buttons (ONE TOUCH DUBBING)**
㊵ **Mixing Microphone Jack (MIXING MIC) 1 mV/200~600Ω, φ3.5**
㊶ **Mixing Level Control (MIXING LEVEL)**
㊷ ***Dolby NR Switch (DOLBY NR)**
㊸ **Reverse Mode Selector (REVERSE MODE)**
㊹ **Power/Battery Check Indicator (POWER/BATT)**
㊺ **Power Switch (POWER)**



Rear Panel

㊻ **DC Input Jack [DC IN 13.2 V (12~15 V) ⊖⊙⊕]**
㊼ **AC Socket (AC IN ~)**
㊽ **Voltage Selector (VOLTAGE SELECTOR)**
㊾ **Female Connector**
㊿ **Power Source Selector (AC-BATT)**
(51) **Line Output Jacks (LINE OUT) 400 mV/4.7 kΩ**
(52) **Beat Proof Switch (BEAT PROOF)**
(53) **Battery Compartment**

D

DISASSEMBLY INSTRUCTIONS

(Deck Section)

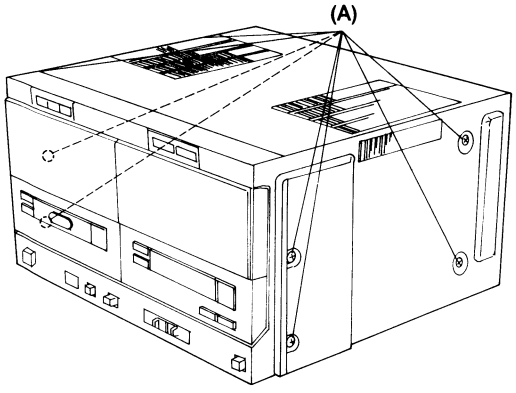


Fig. 1

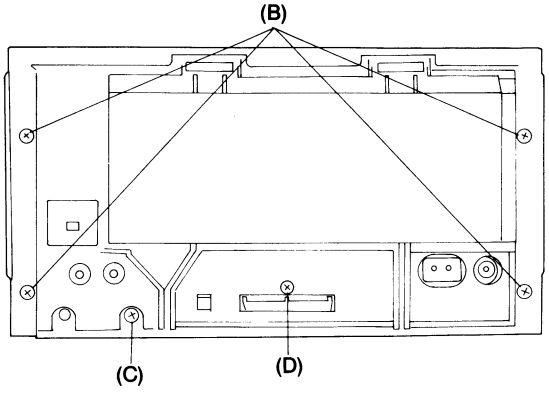


Fig. 2

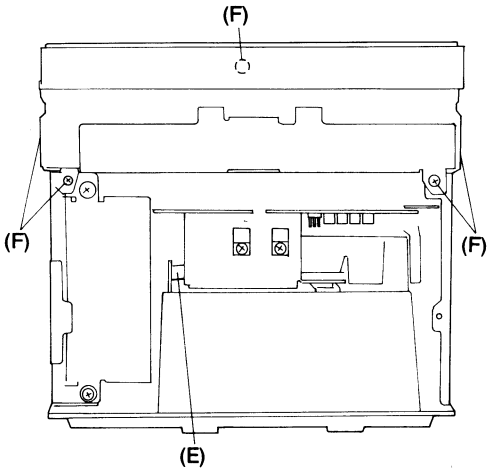


Fig. 3

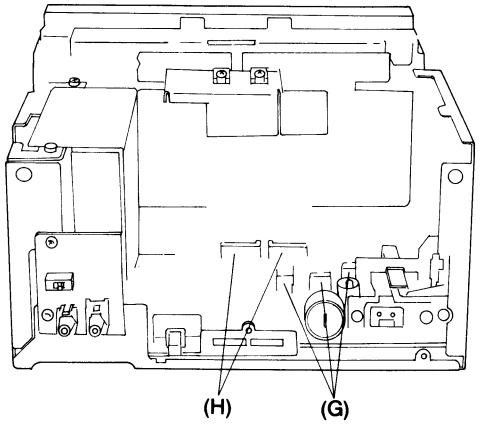


Fig. 4

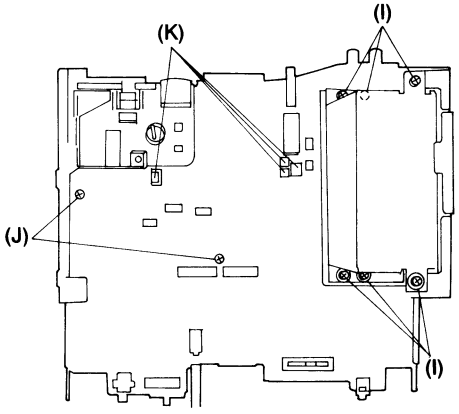


Fig. 5

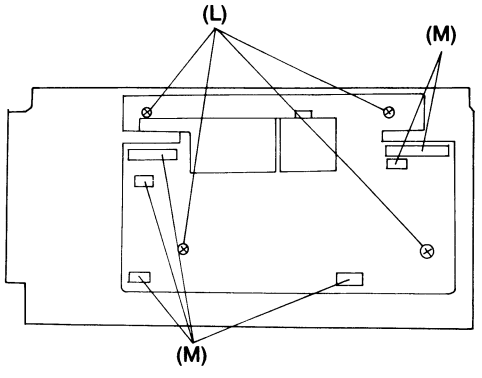


Fig. 6

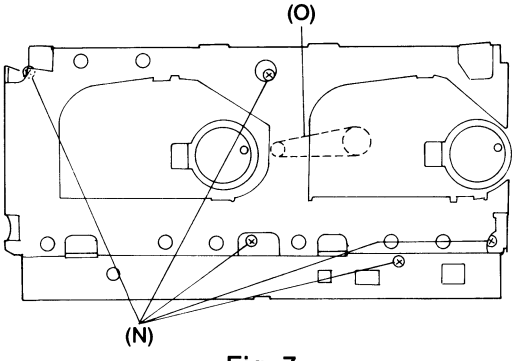


Fig. 7

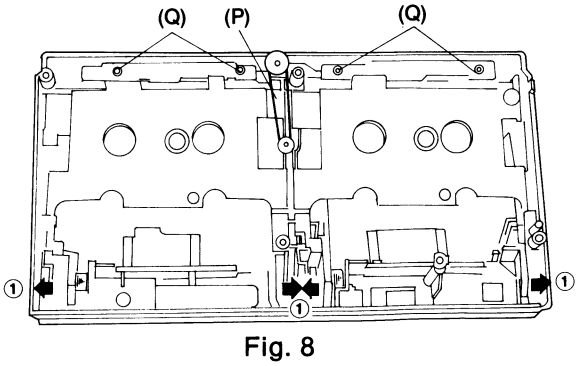


Fig. 8

D

(Tuner Section & Speaker)

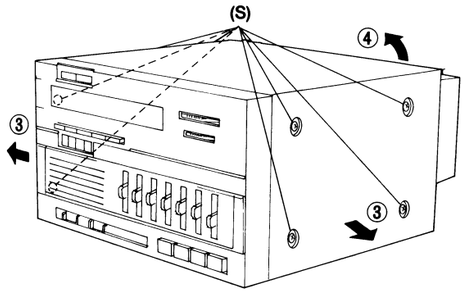


Fig. 9

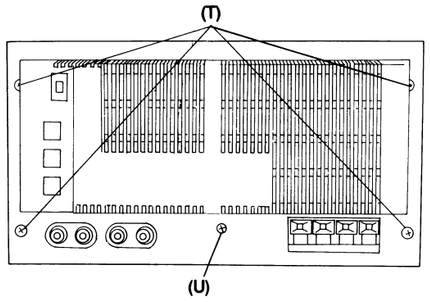


Fig. 10

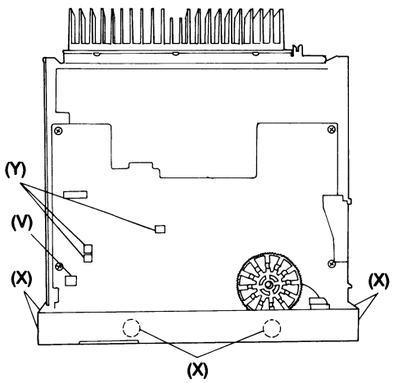


Fig. 11

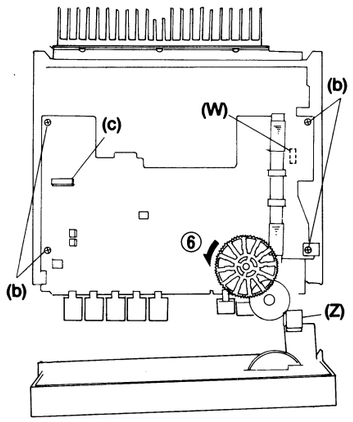


Fig. 12

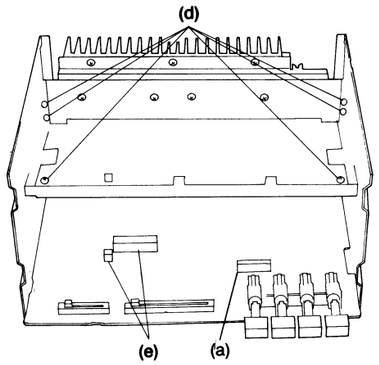


Fig. 13

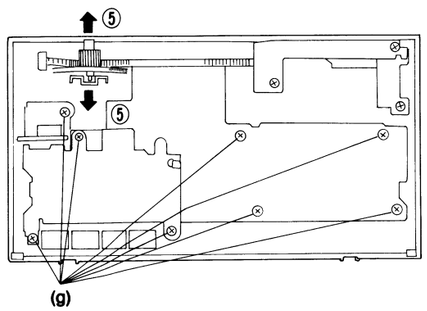


Fig. 14

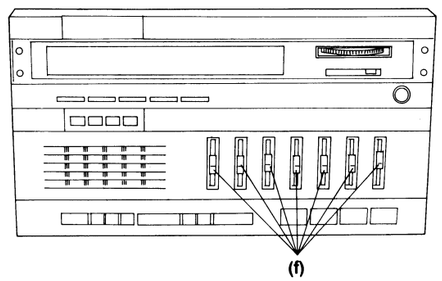


Fig. 15

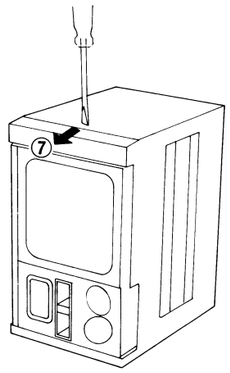


Fig. 16

• Precautions for attachment of front panel (Dial setting point)

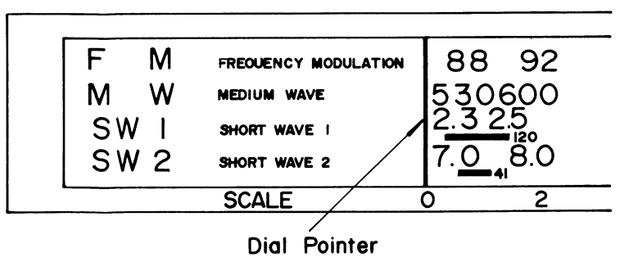


Fig. 17

1. Line up the dial pointer with the position show in the figure. (See Fig. 17)
2. Turn the variable capacitor drum all the way in the direction of arrow ⑥. (See Fig. 12)

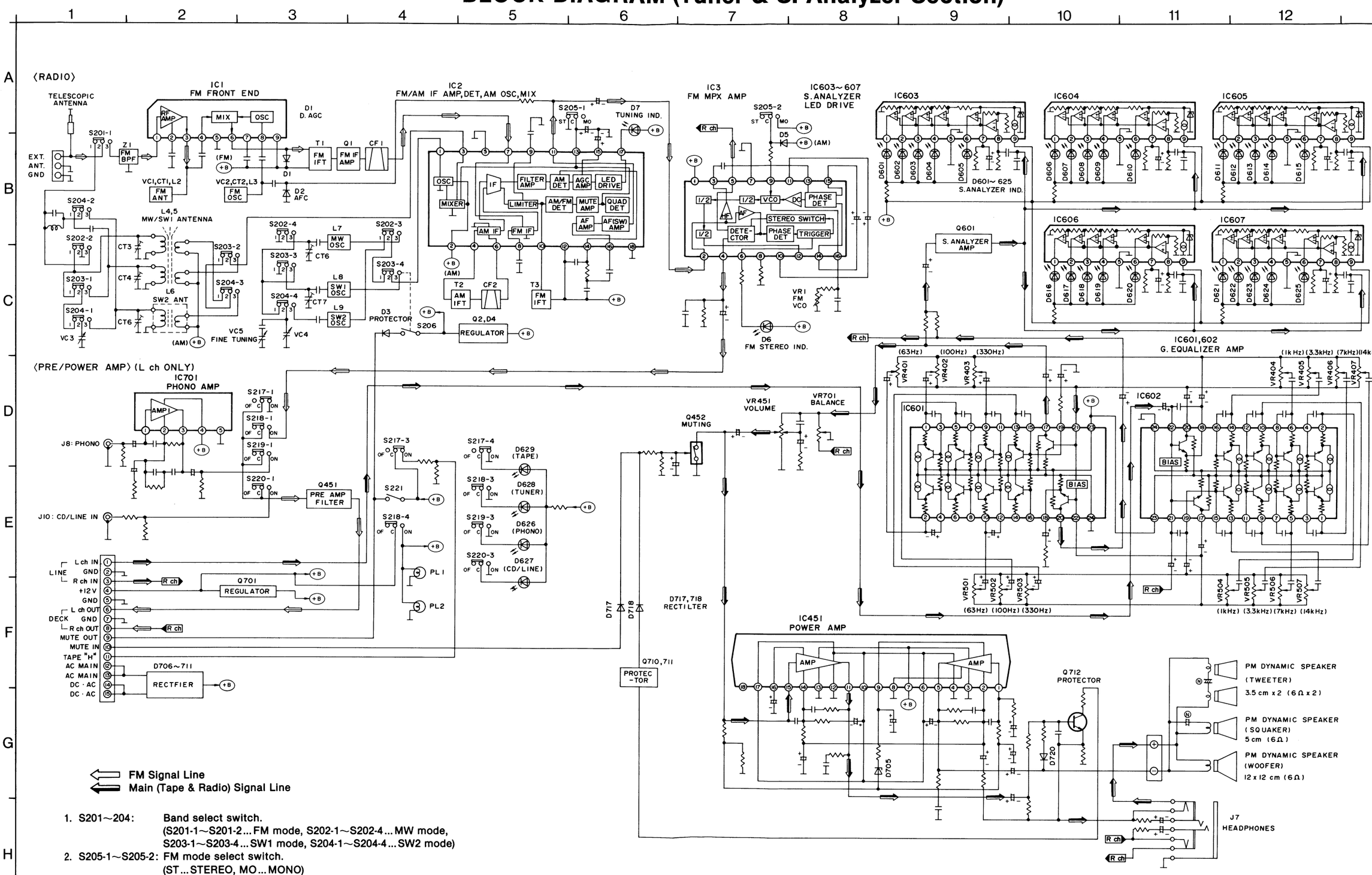
(Deck Section)

Ref. No.	Shown in Fig. —.	To remove —.	Remove —.
1	1	Case Cover	Screw (3×8) mm ..... (A)×8
2	2	Rear Cabinet	Screw (3×8) mm ..... (B)×4
3	2		Screw (3×6) mm ..... (C)×1
4	2		Screw (3×12) mm ..... (D)×1
5	3		Socket (CP31) ..... (E)×1
6	3	Front Cabinet & Mechanism	Screw (3×6) mm ..... (F)×5
7	4		Socket (CP7, CP8, CP9) ..... (G)×3
8	4		Socket (CP5, CP6) ..... (H)×2
9	5	Power Transformer	Screw (4×8) mm ..... (I)×6
10	5	Main Circuit Board	Screw (3×6) mm ..... (J)×2
11	5		Socket (CP1, CP3, CP4-1, 2) ..... (K)×4
12	6	Mechanism Control Circuit Board	Screw (3×6) mm ..... (L)×4
13	6		Socket (CP10, CP11, CP12, CP13, CP14, CP15) ..... (M)×6
14	7	Mechanism	Screw (3×6) mm ..... (N)×5
15	7		Belt ..... (O)×1
16	8	Cassette Compartment (Tape 1 & 2)	Pull out the cassette compartment arm in the direction of arrow ①.
17	8	Counter & LED Circuit Board	Belt ..... (P)×1
18	8		Screw (2×8) mm ..... (Q)×4

(Tuner Section and Speaker)

Ref. No.	Shown in Fig. —.	To remove —.	Remove —.
19	9	Top Case Cabinet	Screw (3×8) mm ..... (S)×8
20	9		Pull out the top cabinet side in the direction of arrow ③, and pull up the top cabinet in the direction of arrow ④.
21	10	Rear Cabinet	Screw (3×8) mm ..... (T)×4
22	10		Screw (3×10) mm ..... (U)×1
23	11		Socket (CP22) ..... (V)×1
24	12		Socket (CP28) ..... (W)×1
25	11	Front Cabinet	Screw (3×6) mm ..... (X)×6
26	11		Socket (CP21, CP23, CP24) ..... (Y)×3
27	12		Socket (CP33) ..... (Z)×1
28	13		Socket (CP43) ..... (a)×1
29	12	Tuner Circuit Board	Screw (3×6) mm ..... (b)×4
30	12		Socket (CP45) ..... (c)×1
31	13	Power IC Amp Circuit Board	Screw (3×6) mm ..... (d)×6
32	13		Socket (CS42, CP49) ..... (e)×2
33	14	Tuning Knob	Push the boss in the direction of arrow ⑤.
34	15	G. Equalizer & S. Analyzer C. Board	Knob ..... (f)×7
35	14		Screw (3×10) mm ..... (g)×8
36	16	Speaker Grille	Push the grille in the direction of arrow ⑦

BLOCK DIAGRAM (Tuner & S. Analyzer Section)

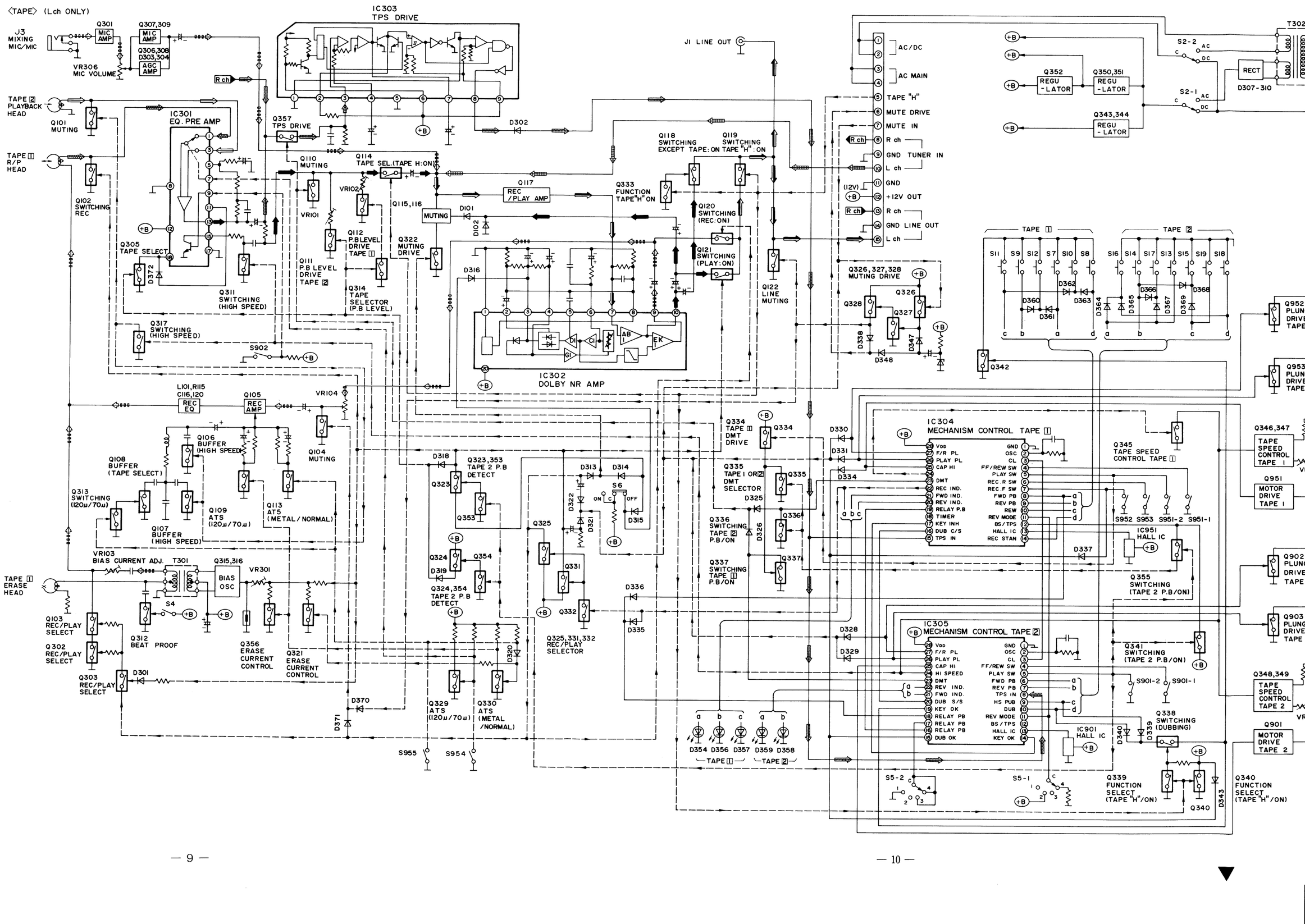


⇦ FM Signal Line
⇦ Main (Tape & Radio) Signal Line

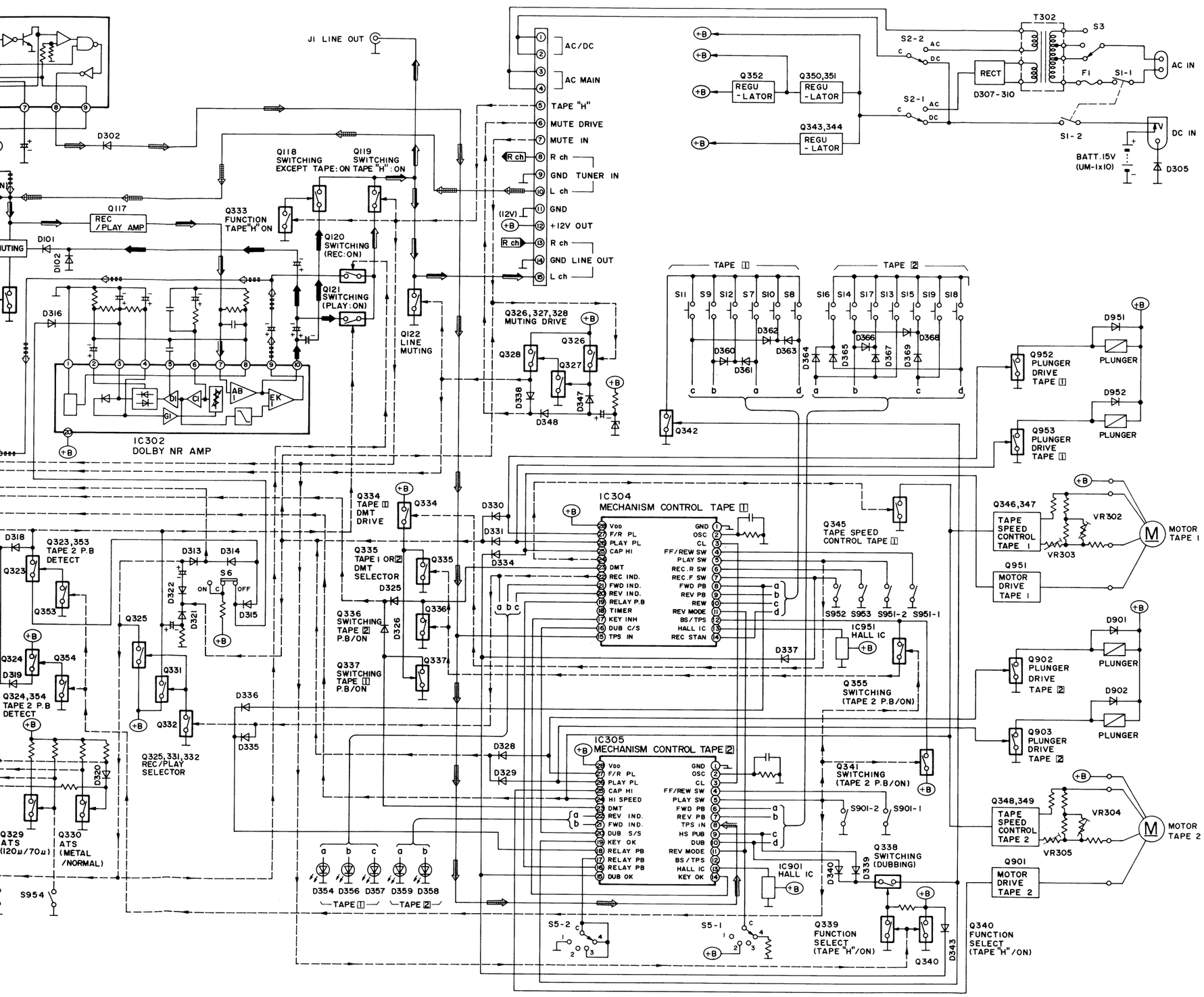
1. S201~204: Band select switch.
   (S201-1~S201-2...FM mode, S202-1~S202-4...MW mode,
   S203-1~S203-4...SW1 mode, S204-1~S204-4...SW2 mode)
2. S205-1~S205-2: FM mode select switch.
   (ST...STEREO, MO...MONO)
3. S206: Muting switch.
4. S217~S220: Function select switch.
   (S217...TAPE, S218...TUNER, S219...PHONO, S220...CD/LINE)
5. S221: Muting switch.

▼ Be sure to fold at the (▼) mark so that mark is on the outside.

BLOCK DIAGRAM (Tape Deck Section)



BLOCK DIAGRAM (Tape Deck Section)



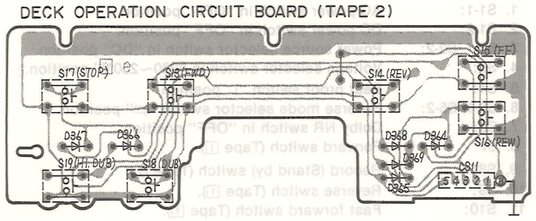
Notes:

1. S1-1: AC power switch in "OFF" position.
2. S1-2: DC power switch in "OFF" position.
3. S2-1, S2-2: Power source selector switch in "DC" position.
4. S3: Voltage selector switch in "230~250V" position.
5. S4: Beat proof switch "I" position.
6. S5-1, S5-2: Reverse mode selector switch "⇄" position.
7. S6: Dolby NR switch in "OFF" position.
8. S7: Forward switch (Tape 1).
9. S8: Record (Stand by) switch (Tape 1).
10. S9: Reverse switch (Tape 1).
11. S10: Fast forward switch (Tape 1).
12. S11: Rewind switch (Tape 1).
13. S12: Stop switch (Tape 1).
14. S13: Forward switch (Tape 2).
15. S14: Reverse switch (Tape 2).
16. S15: Fast forward switch (Tape 2).
17. S16: Rewind switch (Tape 2).
18. S17: Stop switch (Tape 2).
19. S18: Dubbing speed (Normal) switch.
20. S19: Dubbing speed (High) switch.
21. S901-1: FF/REW mode switch (Tape 2).
22. S901-2: Playback mode switch (Tape 2).
23. S902: Auto tape selector switch, 120μs/70μs (Tape 2).
24. S951-1: FF/REW mode switch (Tape 1).
25. S951-2: Playback mode switch (Tape 1).
26. S952: Forward record inhibit switch (Tape 1).
27. S953: Reverse record inhibit switch (Tape 1).
28. S954: Auto tape selector switch, 120μs/70μs (Tape 1).
29. S955: Auto tape selector switch, metal detection (Tape 1).

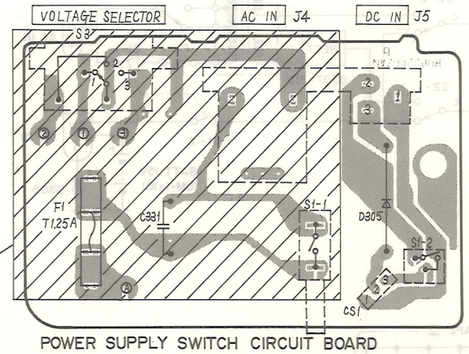
- Tape 1 Playback Signal Line
- Tape 2 Playback Signal Line
- Recording Signal Line
- Tape 1 & 2 Mix Playback Signal Line
- Main (Tape & Radio) Signal Line
- TPS Signal Line
- Radio (FM) Signal Line

CIRCUIT BOARD (Tape Deck Section)

DECK OPERATION CIRCUIT BOARD (TAPE 2)

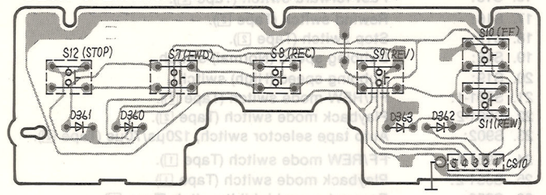


CAUTION
RISK OF ELECTRIC SHOCK
AC voltage line. Please do not touch this portion.



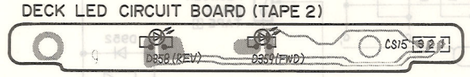
POWER SUPPLY SWITCH CIRCUIT BOARD

DECK OPERATION CIRCUIT BOARD (TAPE 1)

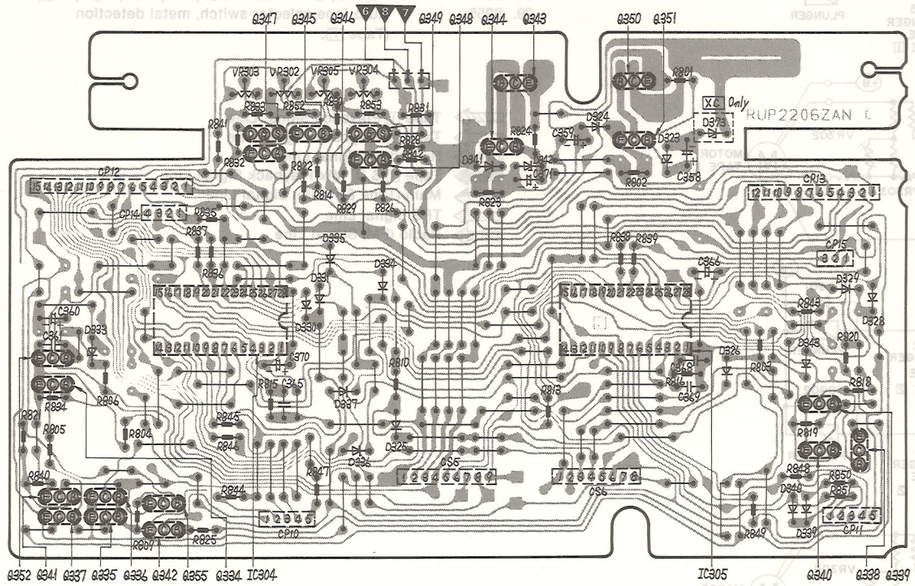


DECK LED CIRCUIT BOARD (TAPE 1)

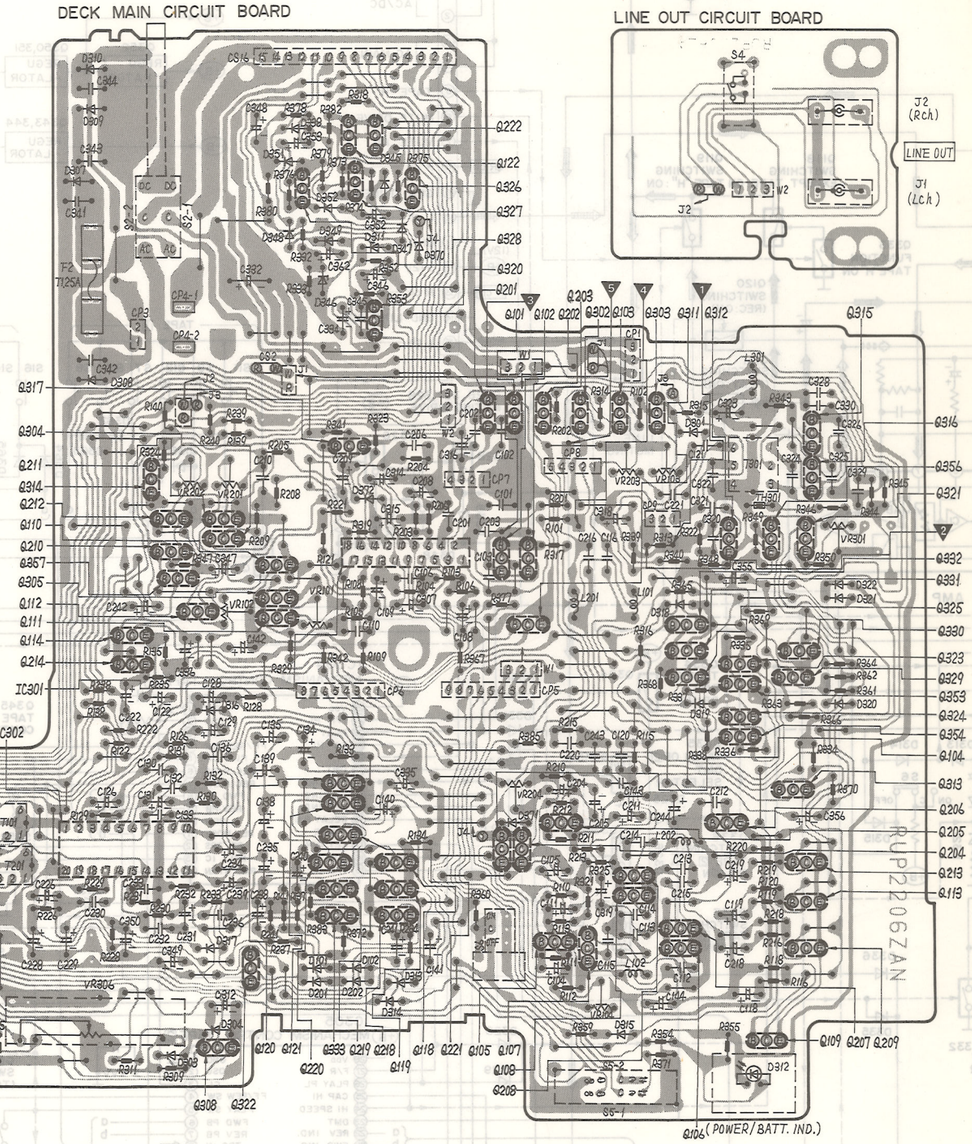
DECK LED CIRCUIT BOARD (TAPE 2)



MECHANISM CONTROL CIRCUIT BOARD

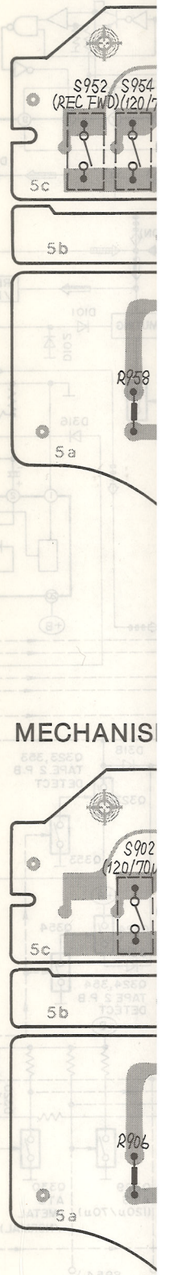


DECK MAIN CIRCUIT BOARD



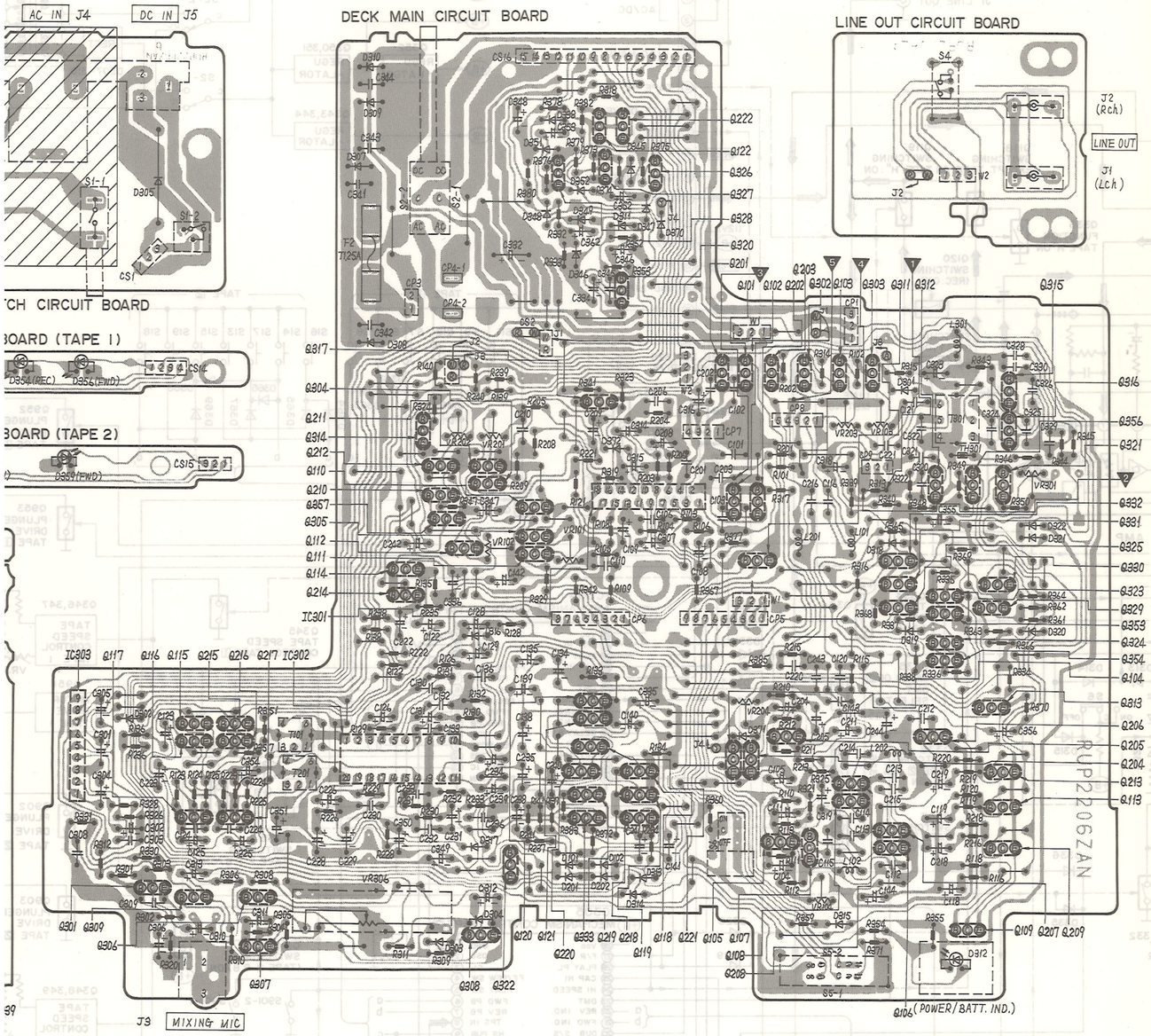
LINE OUT CIRCUIT BOARD

MECHANISM

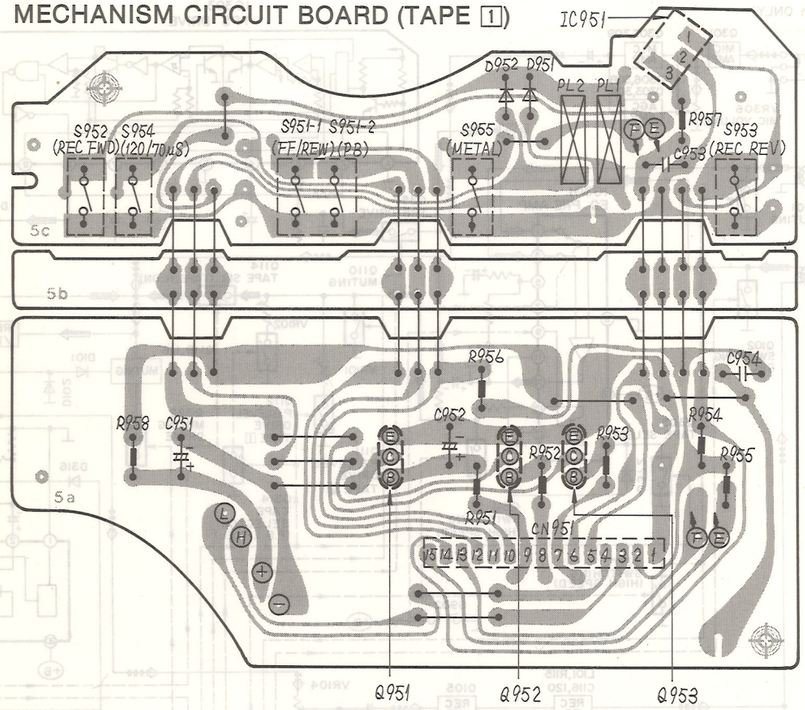


CIRCUIT BOARD (Tape Deck Section)

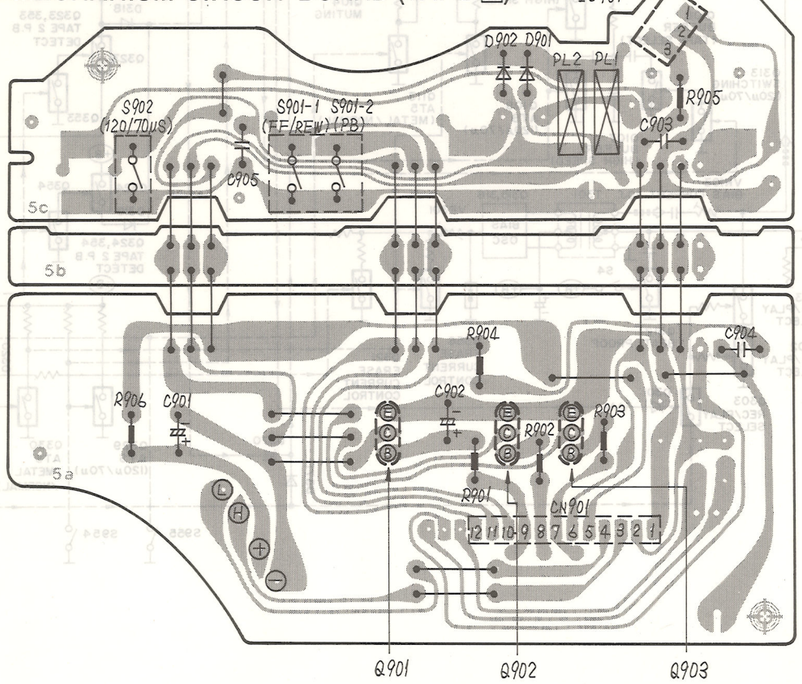
6 7 8 9 10 11 12 13 14 15 16 17 18 19

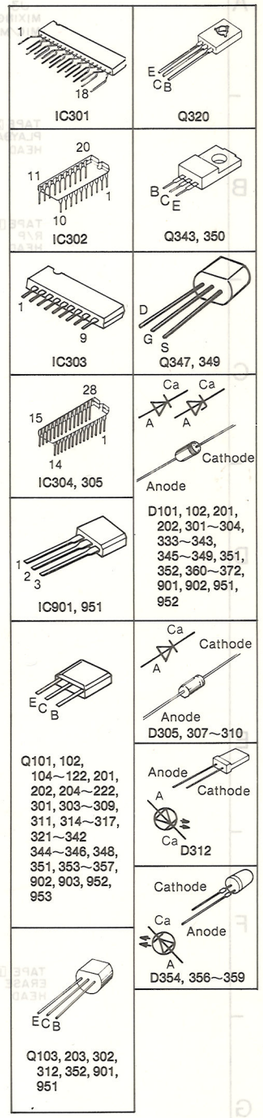


MECHANISM CIRCUIT BOARD (TAPE 1)

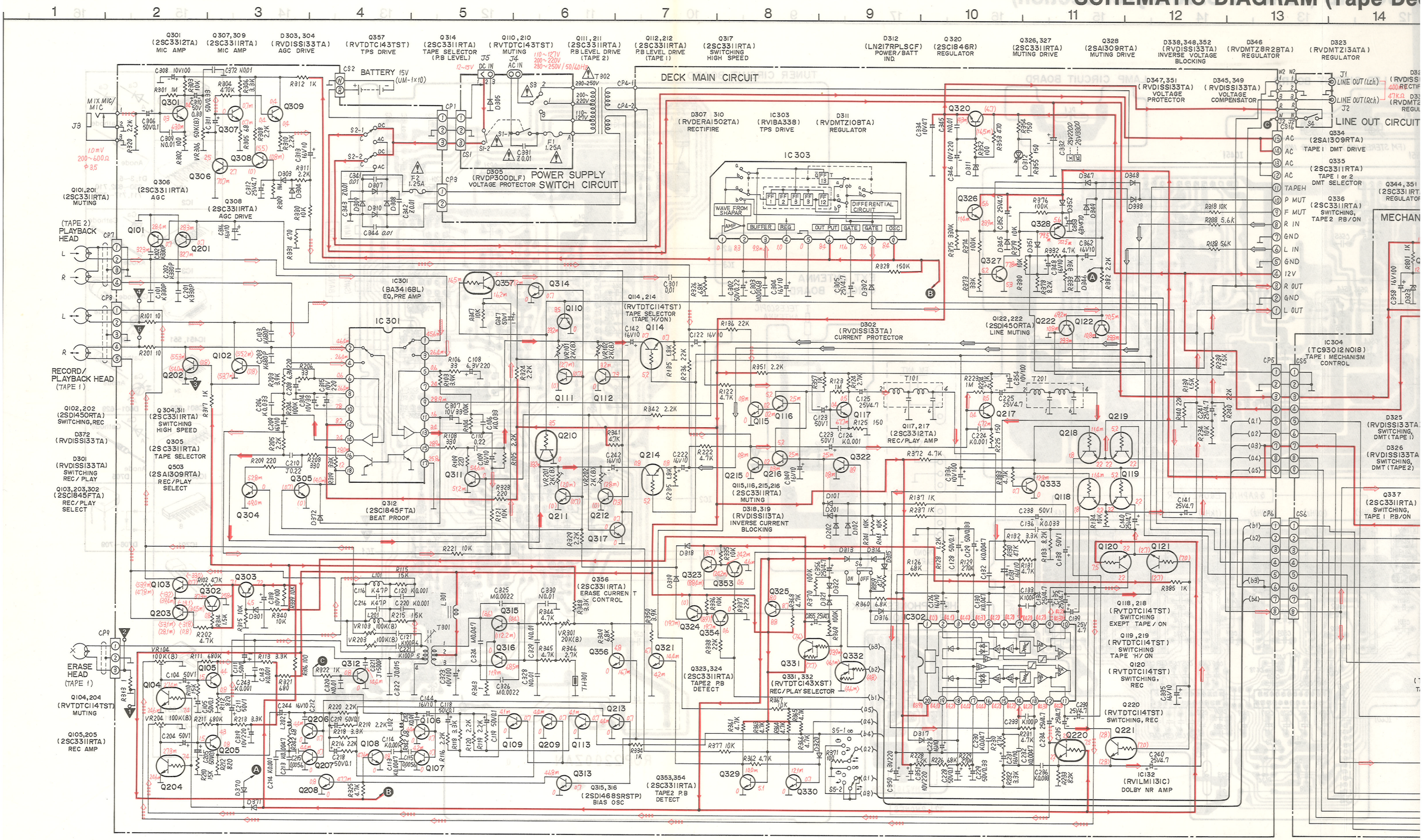


MECHANISM CIRCUIT BOARD (TAPE 2)





SCHEMATIC DIAGRAM (Tape De


DECK MAIN CIRCUIT
POWER SUPPLY SWITCH CIRCUIT
LINE OUT CIRCUIT
MECHAN
IC303
IC301 (BA3416BL) EQ,PRE AMP
IC302
IC304 (TC9301 2N018) TAPE I MECHANISM CONTROL
IC132 (RVILM1131C) DOLBY NR AMP
BATTERY 15V (UM-1×10)
MIX MIC/MIC
ERASE HEAD (TAPE 1)
RECORD/PLAYBACK HEAD (TAPE 1)
(TAPE 2) PLAYBACK HEAD
Q301 (2SC3312TA) MIC AMP
Q307,309 (2SC3311RTA) MIC AMP
D303,304 (RVDISS133TA) AGC DRIVE
Q357 (RVTDTC143TST) TPS DRIVE
Q314 (2SC3311RTA) TAPE SELECTOR (P.B LEVEL)
Q110,210 (RVTDTC143TST) MUTING
Q111,211 (2SC3311RTA) P.B LEVEL DRIVE (TAPE 2)
Q112,212 (2SC3311RTA) P.B LEVEL DRIVE (TAPE 1)
Q317 (2SC3311RTA) SWITCHING HIGH SPEED
D312 (LN217RPLSCF) POWER/BATT IND.
Q320 (2SC1846R) REGULATOR
Q326,327 (2SC3311RTA) MUTING DRIVE
Q328 (2SA1309RTA) MUTING DRIVE
D338,348,352 (RVDISS133TA) INVERSE VOLTAGE BLOCKING
D346 (RVDMTZ8R2BTA) REGULATOR
D323 (RVDMTZ13ATA) REGULATOR
D307 310 (RVDERA1502TA) RECTIFIRE
D311 (RVDMTZ10BTA) REGULATOR
D347,351 (RVDISS133TA) VOLTAGE PROTECTOR
D345,349 (RVDISS133TA) VOLTAGE COMPENSATOR
Q334 (2SA1309RTA) TAPE I DMT DRIVE
Q335 (2SC3311RTA) TAPE I or 2 DMT SELECTOR
Q336 (2SC3311RTA) SWITCHING, TAPE2 PB/ON
Q344,351 (2SC3311RT REGULATOR
D325 (RVDISS133TA) SWITCHING, DMT (TAPE I)
D326 (RVDISS133TA SWITCHING, DMT (TAPE2)
Q337 (2SC3311RTA) SWITCHING, TAPE I PB/ON
Q101,201 (2SC3311RTA) MUTING
Q306 (2SC3311RTA) AGC
Q308 (2SC3311RTA) AGC DRIVE
Q102,202 (2SD1450RTA) SWITCHING,REC
Q304,311 (2SC3311RTA) SWITCHING HIGH SPEED
D372 (RVDISS133TA)
Q305 (2SC3311RTA) TAPE SELECTOR
D301 (RVDISS133TA) SWITCHING REC/PLAY
Q503 (2SA1309RTA) REC/PLAY SELECT
Q103,203,302 (2SC1845FTA) REC/PLAY SELECT
Q312 (2SC1845FTA) BEAT PROOF
Q104,204 (RVTDTC114TST) MUTING
Q105,205 (2SC3311RTA) REC AMP
Q114,214 (RVTDTC114TST) TAPE SELECTOR (TAPE 'H/ON)
D302 (RVDISS133TA) CURRENT PROTECTOR
Q122,222 (2SD1450RTA) LINE MUTING
Q115,116,215,216 (2SC3311RTA) MUTING
Q117,217 (2SC3312TA) REC/PLAY AMP
D318,319 (RVDISS113TA) INVERSE CURRENT BLOCKING
Q356 (2SC3311RTA) ERASE CURRENT CONTROL
Q323,324 (2SC3311RTA) TAPE2 P.B DETECT
Q331,332 (RVTDTC143XST) REC/PLAY SELECTOR
Q315,316 (2SD1468SRSTP) BIAS OSC
Q353,354 (2SC3311RTA) TAPE2 P.B DETECT
Q118,218 (RVTDTC114TST) SWITCHING EXEPT TAPE/ON
Q119,219 (RVTDTC114TST) SWITCHING TAPE 'H/ON
Q120 (RVTDTC114TST) SWITCHING, REC
Q220 (RVTDTC114TST) SWITCHING, REC
Q221
Q222
Q122
Q217
Q218
Q219
Q118
Q333
Q120
Q121
Q220
Q221
Q322
Q325
Q326
Q327
Q328
Q329
Q330
Q332
Q353
Q354
Q355
Q356
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Q379
Q380
Q381
Q382
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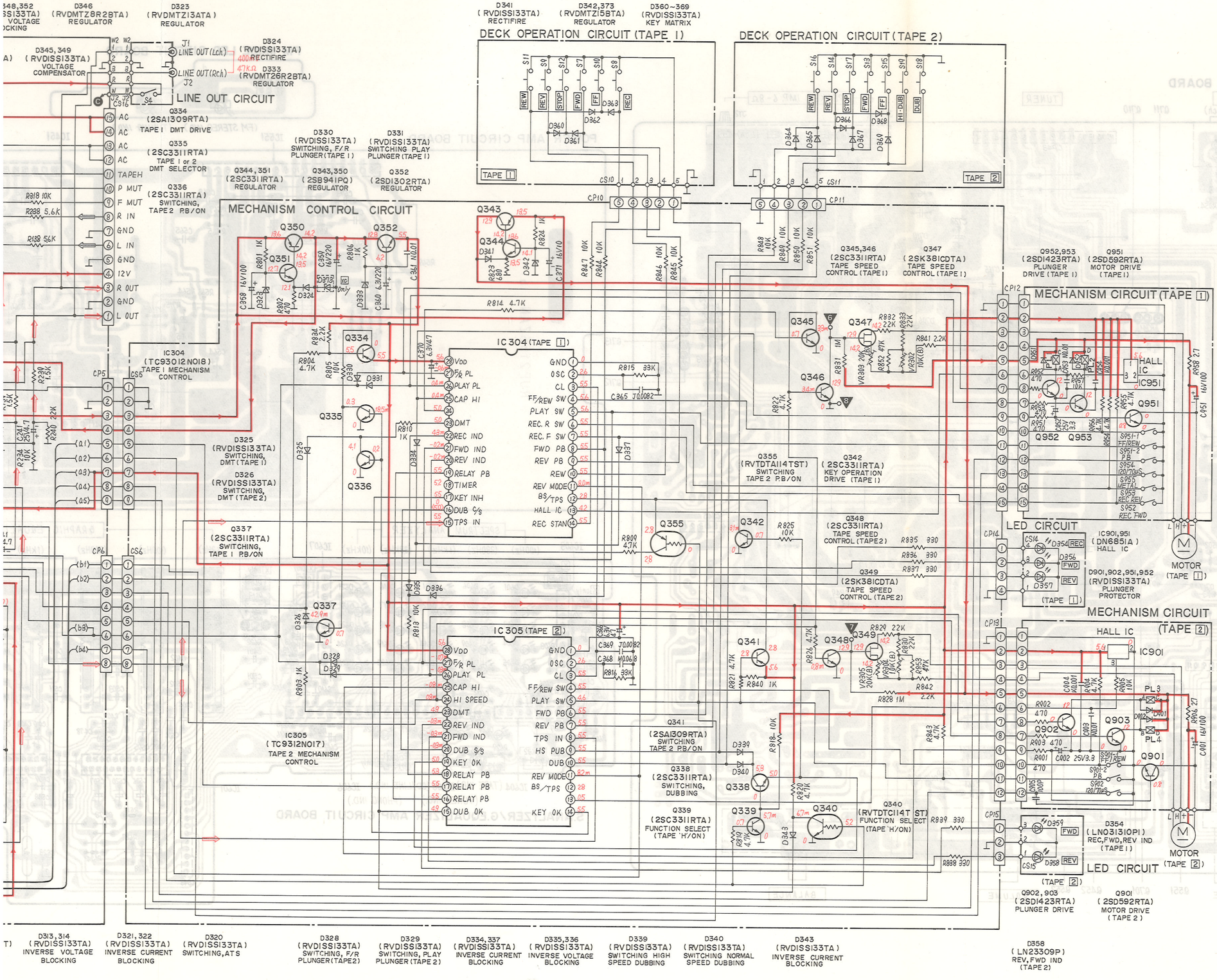
Q384
Q385
Q386
Q387
Q388
Q389
Q390
Q391
Q392

IC DIAGRAM (Tape Deck Section)



Notes:

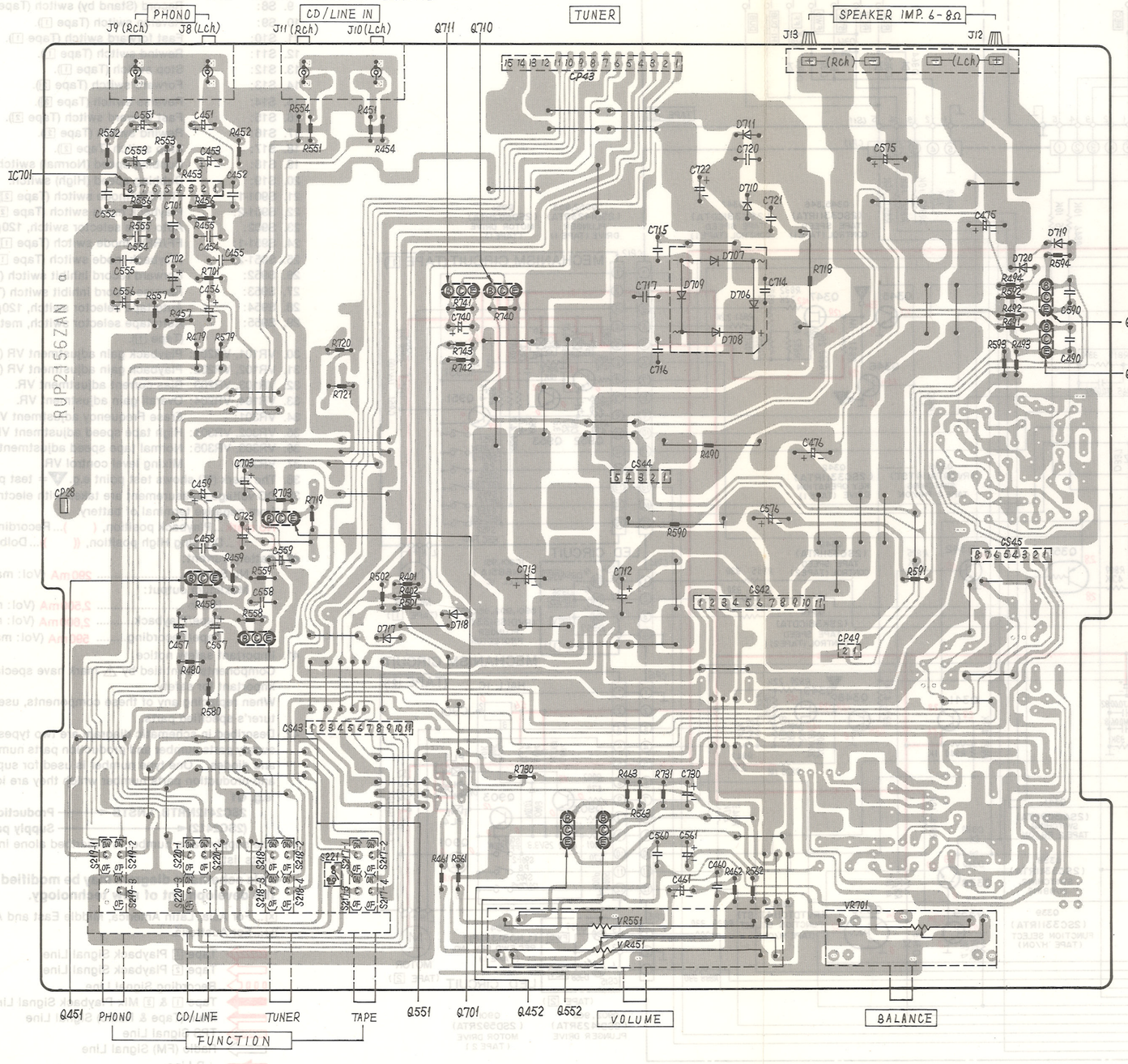
1. S1-1: AC power switch in "OFF" position.
2. S1-2: DC power switch in "OFF" position.
3. S2-1, S2-2: Power source selector switch in "DC" position.
4. S3: Voltage selector switch in "230~250V" position.
5. S4: Beat proof switch "I" position.
6. S5-1, S5-2: Reverse mode selector switch "⇄" position.
7. S6: Dolby NR switch in "OFF" position.
8. S7: Forward switch (Tape 1).
9. S8: Record (Stand by) switch (Tape 1).
10. S9: Reverse switch (Tape 1).
11. S10: Fast forward switch (Tape 1).
12. S11: Rewind switch (Tape 1).
13. S12: Stop switch (Tape 1).
14. S13: Forward switch (Tape 2).
15. S14: Reverse switch (Tape 2).
16. S15: Fast forward switch (Tape 2).
17. S16: Rewind switch (Tape 2).
18. S17: Stop switch (Tape 2).
19. S18: Dubbing speed (Normal) switch.
20. S19: Dubbing speed (High) switch.
21. S901-1: FF/REW mode switch (Tape 2).
22. S901-2: Playback mode switch (Tape 2).
23. S902: Auto tape selector switch, 120μs/70μs (Tape 2).
24. S951-1: FF/REW mode switch (Tape 1).
25. S951-2: Playback mode switch (Tape 1).
26. S952: Forward record inhibit switch (Tape 1).
27. S953: Reverse record inhibit switch (Tape 1).
28. S954: Auto tape selector switch, 120μs/70μs (Tape 1).
29. S955: Auto tape selector switch, metal detection (Tape 1).
30. VR101, VR201: Playback gain adjustment VR (Tape 2).
31. VR102, VR202: Playback gain adjustment VR (Tape 1).
32. VR103, VR203: Bias current adjustment VR.
33. VR104, VR204: Overall gain adjustment VR.
34. VR301: Erase Frequency adjustment VR.
35. VR302, VR304: High tape speed adjustment VR.
36. VR303, VR305: Normal tape speed adjustment VR.
37. VR306: Mixing level control VR.
38. The mark (▼) shows test point e.g. ▼1 = test point 1.
39. DC voltage measurement are taken with electronics voltmeter from negative terminal of battery.
    No mark ... Playback position, ( ) ... Recording position, 〈 〉 ... Dubbing High position, (( )) ... Dolby NR ON position
40. Battery current:
    No Signal ..... 290 mA (Vol: max)
    Maximum output:
    Radio ..... 2,500 mA (Vol: max)
    Tape/Playback..... 2,600 mA (Vol: max)
    Tape/Recording..... 590 mA (Vol: max)
41. Important safety notice
    Components identified by ⚠ mark have special characteristics important for safety.
    When replacing any of these components, use only manufacturer's specified parts.
42. Described in schematic diagram are two types of numbers; the supply parts number and production parts number for transistors and diodes. One type number is used for supply parts number and production parts number which they are identical.
    e.g. Q1
    2SC2412NRTB, LNSTB ← Production parts number
    (2SC2412) ← Supply parts number
43. The supply parts number is described alone in the replacement parts list.

•This schematic diagram may be modified at any time with the development of new technology.

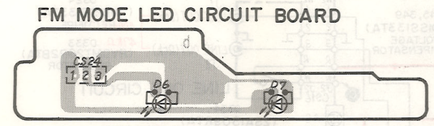
[X] ... For Asia, Latin America, Middle East and Africa areas.
[L] ... For Australia.

- Tape 1 Playback Signal Line
- Tape 2 Playback Signal Line
- Recording Signal Line
- Tape 1 & 2 Mix Playback Signal Line
- Main (Tape & Radio) Signal Line
- TPS Signal Line
- Radio (FM) Signal Line
- +B Line

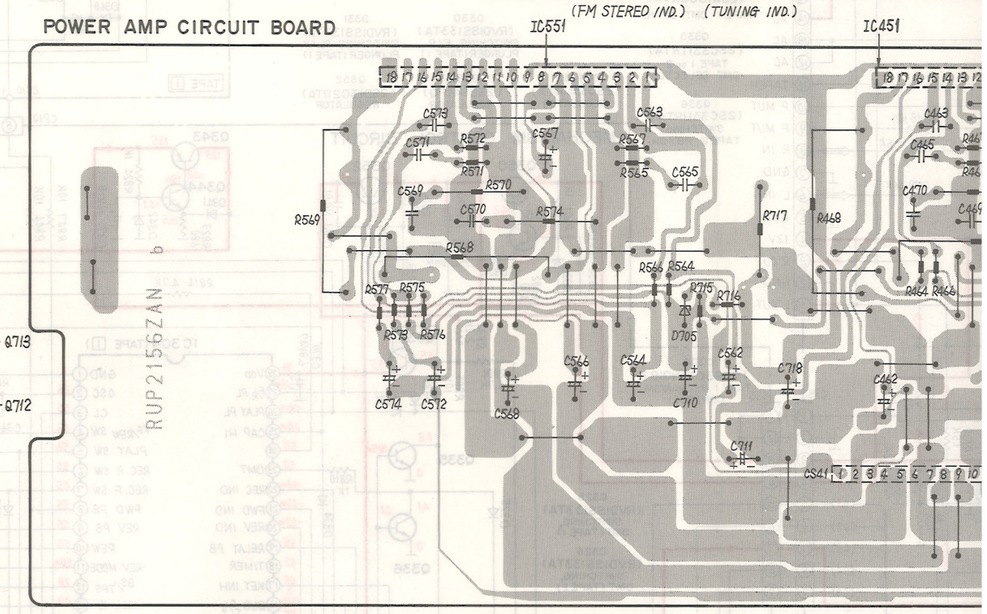
TUNER AMPLIFIRE MAIN CIRCUIT BOARD



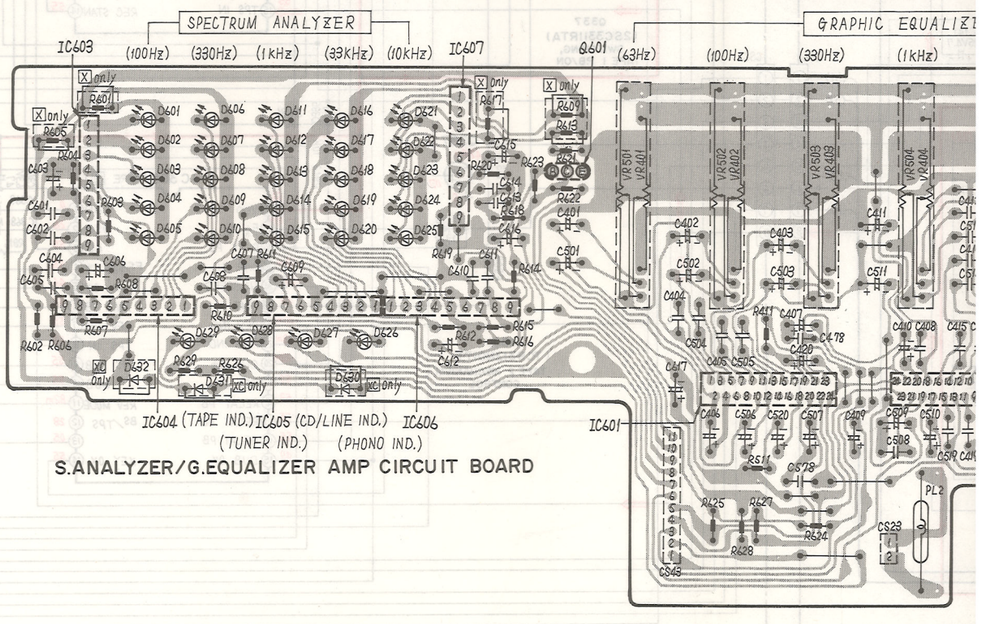
FM MODE LED CIRCUIT BOARD



POWER AMP CIRCUIT BOARD



S.ANALYZER/G.EQUALIZER AMP CIRCUIT BOARD



BOARD (Tuner & S. Analyzer Section)

12 13 14 15 16 17 9 10 11 12 13 14 15 16

DE LED CIRCUIT BOARD

(FM STEREO IND.) (TUNING IND.)

LAMP CIRCUIT BOARD

IC451

GRAPHIC EQUALIZER

(63Hz) (100Hz) (330Hz) (1kHz) (3.3kHz) (7kHz) (14kHz)

IC601 IC602

EXT. ANTENNA CIRCUIT BOARD

TELESCOPIC ANTENNA

FM ANT

SW ANT

PHONO EARTH

HEADPHONES JACK CIRCUIT BOARD

J7 PHONES

TUNER CIRCUIT BOARD

KC only

IC1 IC2 IC3

Q1 Q2

BAND SELECTOR (FM) (MW) (SW1) (SW2)

FM MODE

RUP2200ZAN

IC1

Ca A

Cathode

Anode

D1, 3~5, 630~632, 710, 711, 717~720

IC2

Ca A

Cathode

Anode

D2

IC3

Cathode Ca A Anode

IC451, 551

D6, 7

Cathode Ca A Anode

IC601, 602

D601~629

Ca A Cathode

Anode

IC603~607

D705

IC701

D706~709

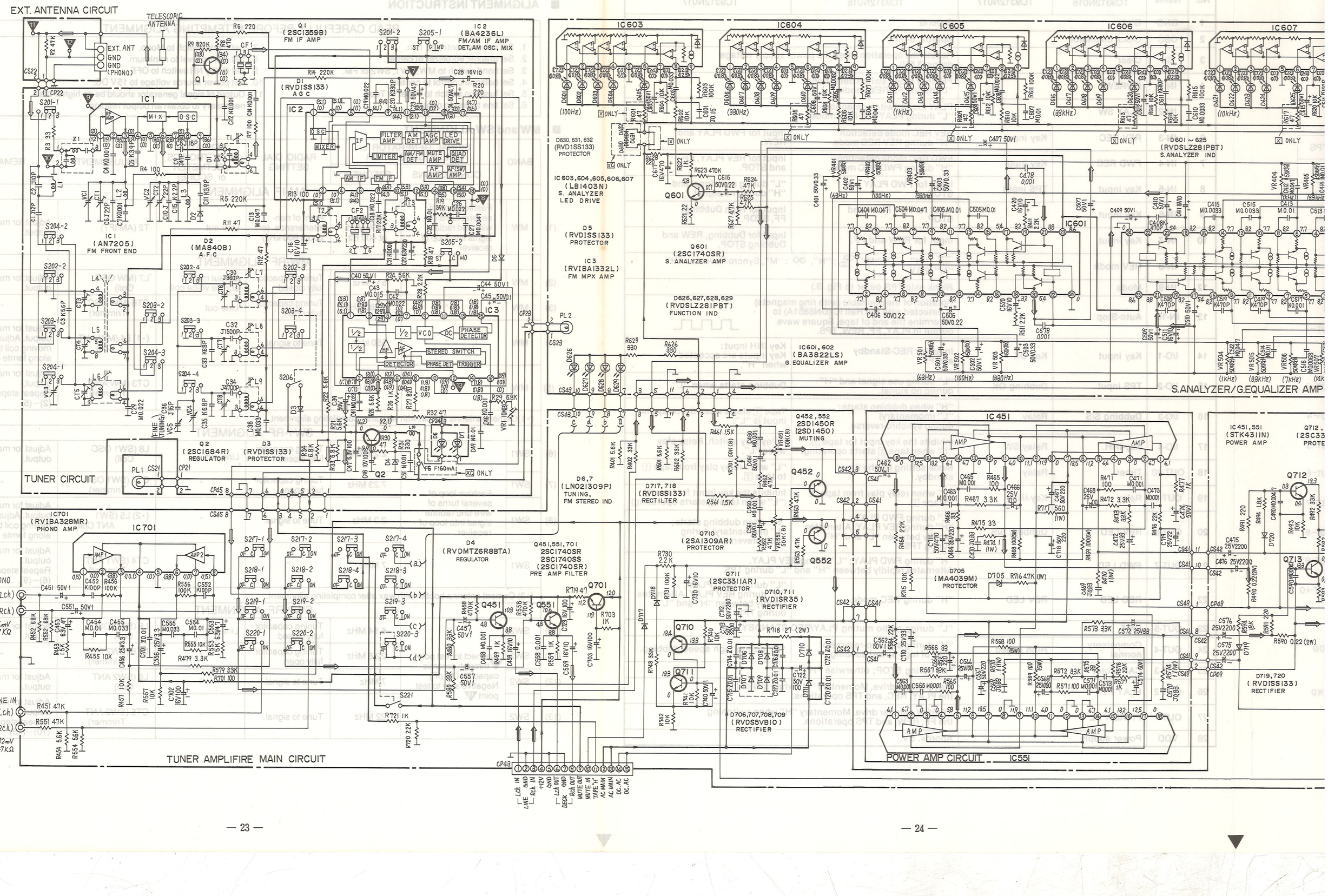
E C B

Q1, 2

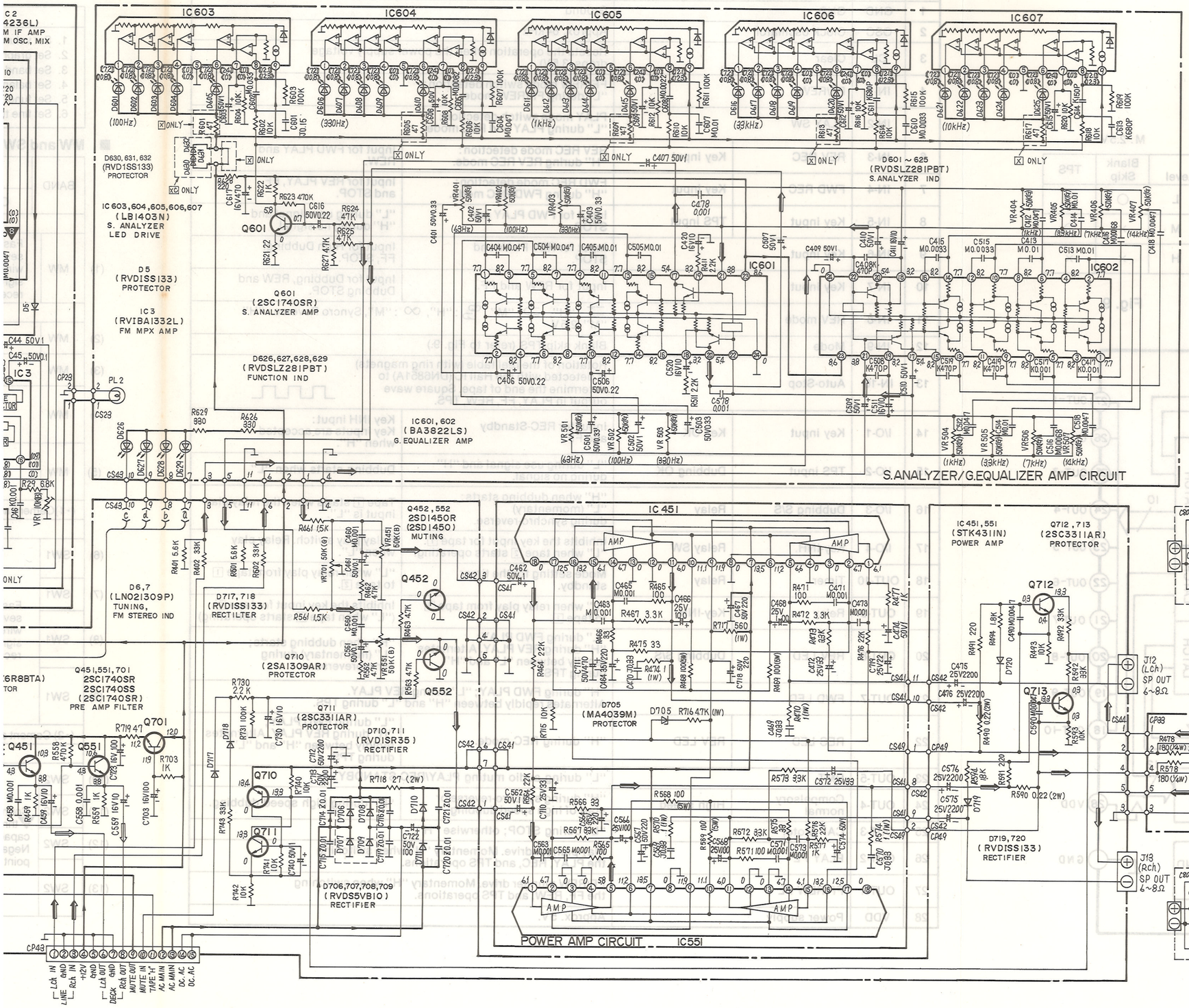
E C B

Q451, 452, 551, 552, 601, 701, 710~713

SCHEMATIC DIAGRAM (Tuner & S. Analyzer Section)



SCHEMATIC DIAGRAM (Tuner & S. Analyzer Section)



Notes:

1. S201~S204: Band select switch.
   (S201-1~S201-2...FM mode,
   S202-1~S202-4...MW mode,
   S203-1~S203-4...SW1 mode,
   S204-1~S204-4...SW2 mode)
2. S205-1~S205-2: FM mode select switch in "STEREO" position.
   (ST...STEREO, MON...MONO)
3. S206: Muting switch.
4. S217~S220: Function select switch in "TAPE" position.
   (S217...TAPE, S218...TUNER, S219...PHONO, S220...CD/LINE)
5. S221: Muting switch.
6. VR1: FM VCO adjustment VR.
7. VR401~VR407: G. Equalizer control VR.
8. VR451, VR551: Volume control VR.
9. VR501~VR507: G. Equalizer control VR.
10. VR701: Balance control VR.
11. The mark (▼) shows test point e.g. ▼=test point 1.
12. DC volteage measurement are taken with electronics voltmeter from negative terminal of battery.
    No mark...Playback position, 〈 〉...Phono position,
    ( )...FM (Stereo) position, (( ))...FM (Mono) position,
    [ ]...AM position, [[ ]]...LED ON position,
    〈 〉...LED OFF position.
13. Battery current: Radio (FM mode).....2,150mA (VOL max.)
    Radio (AM mode) .....1,400mA (VOL max.)
14. Described in schematic diagram are two types of numbers; the supply parts number and production parts number for transistors and diodes. One type number is used for supply parts number and production parts number which they are identical.
    e.g. Q1
    2SC2412NRTB, LNSTB —— Production parts number
    (2SC2412) ———— Supply parts number
15. The supply parts number is described alone in the replacement parts list.

- **This schematic diagram may be modified at any time with the development of new technology.**

• IC305 TC9312N017, IC304 TC9312N018 (Mechanism Control)

1) Termination

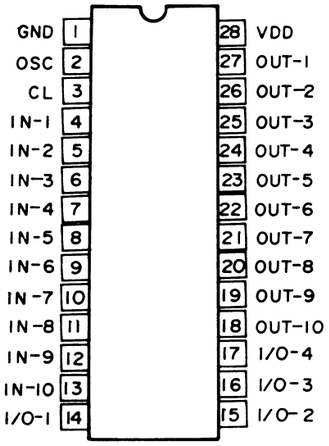


Fig. 8

M: 2.5V

Level	Blank Skip	TPS
L	○	○
M	×	○
H	×	×

Fig. 9

2) Block Diagram

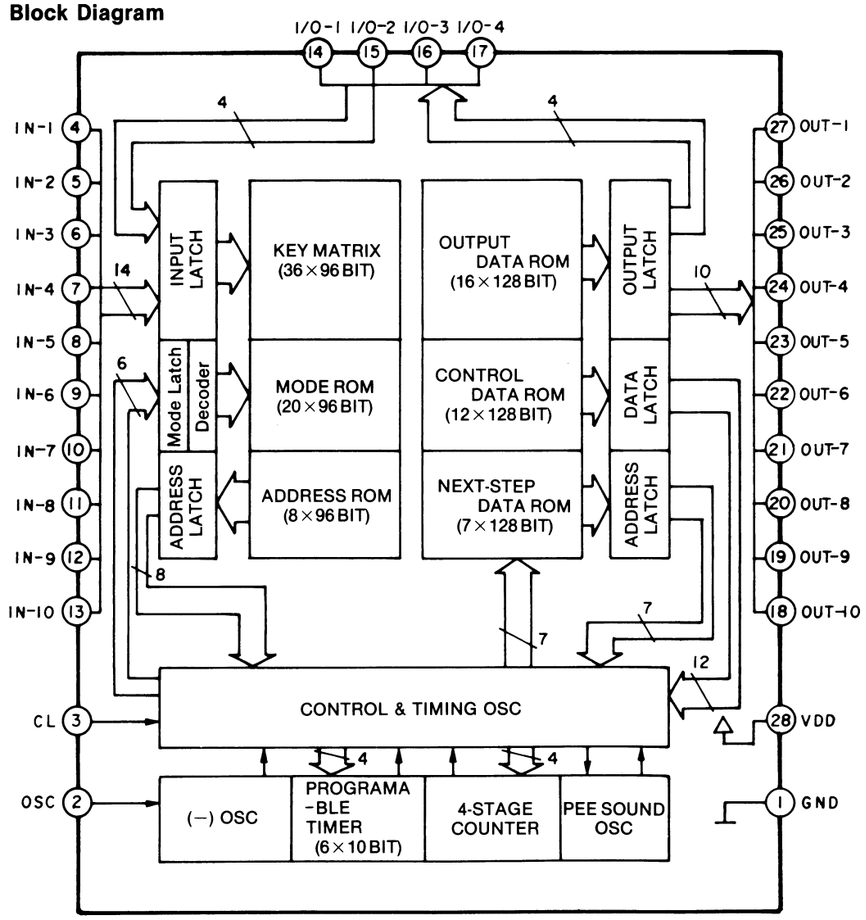


Fig. 10

Pin No.	Pin Name	Function		Description	
		TC9312N018	TC9312N017	TC9312N018	TC9312N017
1	GND	GND		Ground	
2	OSC	Clock oscillator		Approx. 64kHz	
3	CL	Clear		Resets the operation when the power supply voltage drops (3.5V).	
4	IN-1	FF/REW		FF/REW mode switch detection: "L" during FF/REW mode.	
5	IN-2	PLAY SW		PLAY mode switch detection: "L" during PLAY and REC mode.	
6	IN-3	REV REC	Key input	REV REC mode detection: "H" during REV REC mode.	Input for FWD PLAY and REW.
7	IN-4	FWD REC	Key input	FWD REC mode detection: "H" during FWD REC mode.	Input for REV PLAY, FF and STOP.
8	IN-5	Key input	TPS input	Input for FWD PLAY and STOP.	"L" during use signal and "H" during no signal.
9	IN-6	Key input		Input for REV PLAY and STOP.	Input for High Dubbing, FF, STOP.
10	IN-7	Key input		Input for REW and FF.	Input for Dubbing, REW and Dubbing STOP.
11	IN-8	REV mode		⇄ : "H", ⊃ : "M", ⟲ : "H", ∞ : "M", Syncro Reverse : "H" "M" :2.5V	
12	IN-9	Mode		Blank skip/TPS (refer to Fig. 9.)	
13	IN-10	Auto-Stop		Rotation of the reel table (with ring magnets) is detected with the Hall IC (DN6851A) to determine the end of tape. Square wave output in PLAY, FF, REW, TPS. ⎍⎍⎍	
14	I/O-1	Key input	Key OK	Input for REC-Standby and FF.	Key INH input: Key inputs are accepted when "H".
15	I/O-2	TPS input	Dubbing OK	"L" during use signal and "H" during no signal.	Dubbing starts when "L".
16	I/O-3	Dubbing S/S	Relay	"H" when dubbing starts; "L" (momentary) during synchro-reverse.	Tape [1] starts when the relay play input is "L".
17	I/O-4	Key-INH.	Relay SW	Inhibits the key input for tape [1]. "L" when tape [2] starts operating.	Relay play switch. Relay play when "L".
18	OUT-10	Timer	Relay	Mode setting for the timer standby.	"L" when relay play from tape [1] to tape [2].
19	OUT-9	Relay	Key-INH.	"L" when relay play from tape [2] to tape [1].	Inhibits the key input for tape [2]. ("L" when tape [1] starts operating)
20	OUT-8	REV LED	Dubbing S/S	"L" during FWD PLAY; "H" during REV PLAY. Alternates repidly between "L" and "H" during TPS.	"H" when dubbing starts; "L" (momentary) during syncroreverse.
21	OUT-7	FWD LED		"H" during FWD PLAY; "L" during REV PLAY. Alternates repidly between "H" and "L" during TPS.	
22		REC LED	REV LED	"H" during REC mode.	"L" during FWD PLAY; "H" during REV PLAY. Alternates repidly between "H" and "L" during TPS.
23	OUT-5	DMT		"L" during audio muting PLAY/REC STANDBY.	
24	OUT-4	Compalsory normal	High speed	"H" during synchro-reverse or start of high speed dubbing.	"H" during high speed dubbing.
25	OUT-3	CAP Motor		"L" during STOP; otherwise "H".	
26	OUT-2	PLAY PL		Play plunger drive. Momentary "H" when switching the PLAY, REC, and TPS operations.	
27	OUT-1	FF/REW PL		FF/REW plunger drive. Momentary "H" when switching the FF, REW, and TPS operations.	
28	VDD	Power supply		Approx. 5V.	

■ ALIGNMENT

1. Set volume
2. Set graphi
3. Set band s
4. Set balanc
5. Set functio
6. Set fine tu

■ MW and SW

	BAND		
		CO	
(1)	MW	Fash seve wire signa recei	
(2)	MW		
(3)	MW		
(4)	MW		
(5)	MW		
	(•1)Cement an		
(6)	SW1	Fash seve wire signa recei	
(7)	SW1		
(8)	SW1		
(9)	SW1		
	(•2) Cement an		
(10)	SW2		
(11)	SW2	Conne ▼ throu capaci Negati point ▼	
(12)	SW2		
(13)	SW2		

Pin No.	Pin Name	Function		Description	
		TC9312N018	TC9312N017	TC9312N018	TC9312N017
1	GND	GND		Ground	
2	OSC	Clock oscillator		Approx. 64kHz	
3	CL	Clear		Resets the operation when the power supply voltage drops (3.5V).	
4	IN-1	FF/REW		FF/REW mode switch detection: "L" during FF/REW mode.	
5	IN-2	PLAY SW		PLAY mode switch detection: "L" during PLAY and REC mode.	
6	IN-3	REV REC	Key input	REV REC mode detection: "H" during REV REC mode.	Input for FWD PLAY and REW.
7	IN-4	FWD REC	Key input	FWD REC mode detection: "H" during FWD REC mode.	Input for REV PLAY, FF and STOP.
8	IN-5	Key input	TPS input	Input for FWD PLAY and STOP.	"L" during use signal and "H" during no signal.
9	IN-6	Key input		Input for REV PLAY and STOP.	Input for High Dubbing, FF, STOP.
10	IN-7	Key input		Input for REW and FF.	Input for Dubbing, REW and Dubbing STOP.
11	IN-8	REV mode		⇄ : "H", ⇉ : "M", ⇆ : "H", ∞ : "M", Syncro Reverse : "H" "M" :2.5V	
12	IN-9	Mode		Blank skip/TPS (refer to Fig. 9.)	
13	IN-10	Auto-Stop		Rotation of the reel table (with ring magnets) is detected with the Hall IC (DN6851A) to determine the end of tape. Square wave output in PLAY, FF, REW, TPS.	
14	I/O-1	Key input	Key OK	Input for REC-Standby and FF.	Key INH input: Key inputs are accepted when "H".
15	I/O-2	TPS input	Dubbing OK	"L" during use signal and "H" during no signal.	Dubbing starts when "L".
16	I/O-3	Dubbing S/S	Relay	"H" when dubbing starts; "L" (momentary) during synchro-reverse.	Tape [1] starts when the relay play input is "L".
17	I/O-4	Key-INH.	Relay SW	Inhibits the key input for tape [1]. "L" when tape [2] starts operating.	Relay play switch. Relay play when "L".
18	OUT-10	Timer	Relay	Mode setting for the timer standby.	"L" when relay play from tape [1] to tape [2].
19	OUT-9	Relay	Key-INH.	"L" when relay play from tape [2] to tape [1].	Inhibits the key input for tape [2]. ("L" when tape [1] starts operating)
20	OUT-8	REV LED	Dubbing S/S	"L" during FWD PLAY; "H" during REV PLAY. Alternates repidly between "L" and "H" during TPS.	"H" when dubbing starts; "L" (momentary) during syncroreverse.
21	OUT-7	FWD LED		"H" during FWD PLAY; "L" during REV PLAY. Alternates repidly between "H" and "L" during TPS.	
22		REC LED	REV LED	"H" during REC mode.	"L" during FWD PLAY; "H" during REV PLAY. Alternates repidly between "H" and "L" during TPS.
23	OUT-5	DMT		"L" during audio muting PLAY/REC STANDBY.	
24	OUT-4	Compalsory normal	High speed	"H" during synchro-reverse or start of high speed dubbing.	"H" during high speed dubbing.
25	OUT-3	CAP Motor		"L" during STOP; otherwise "H".	
26	OUT-2	PLAY PL		Play plunger drive. Momentary "H" when switching the PLAY, REC, and TPS operations.	
27	OUT-1	FF/REW PL		FF/REW plunger drive. Momentary "H" when switching the FF, REW, and TPS operations.	
28	VDD	Power supply		Approx. 5V.	

MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT.

1. Set volume control to min.
2. Set graphic equalizer to center.
3. Set band switch to MW, SW1, SW2 or FM.
4. Set balance control to center.
5. Set function switch to Tuner or Tape.
6. Set fine tuning to center
7. Set mode switch to Mono.
8. Set mixing level to minimum.
9. Set Dolby NR switch to OFF.
10. Set power source voltage to 15V DC.
11. Output of signal generator should be no higher than necessary to obtain an output reading.

■ MW and SW ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
		CONNECTIONS	FREQUENCY				
		AM-IF ALIGNMENT					
(1)	MW	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455 kHz 30% Mod. at 400 Hz	Point of non-interference. (on/about 600 kHz)	Line out	T2 (AM IFT)	Adjust for maximum output.
		MW-RF ALIGNMENT					
(2)	MW	〃	511 kHz	Tuning capacitor fully closed	Output meter across voice coil	L7 (MW OSC Coil)	Adjust for maximum output.
(3)	MW	〃	1,680 kHz	Tuning capacitor fully open	Line out	CT6 (MW OSC Trimmer)	〃
(4)	MW	〃	550 kHz	Tune to signal.	〃	(•1) L4 (MW ANT Coil)	Adjust for maximum output. Adjust L4 by moving coil bobbin along ferrite core.
(5)	MW	〃	1,500 kHz	〃	〃	CT3 (MW ANT Trimmer)	Adjust for maximum output. Repeat steps (2)~(5).
	(•1)Cement antenna bobbin with wax after completing alignment.						
		SW1-RF ALIGNMENT					
(6)	SW1	Fashion loop of several turns of wire and radiate signal into loop of receiver.	2.25 MHz	Tuning capacitor fully closed	Line out	L8 (SW1 OSC Coil)	Adjust for maximum output.
(7)	SW1		7.23 MHz	Tuning capacitor fully open	〃	CT7 (SW1 OSC Trimmer)	〃
(8)	SW1		2.3 MHz	Tune to signal.	〃	(•2) L5 (SW1 ANT Coil)	Adjust for maximum output. Adjust L5 by moving coil bobbin along ferrite core.
(9)	SW1		7 MHz	〃	〃	CT4 (SW1 ANT Trimmer)	Adjust for maximum output. Repeat steps (6)~(9).
	(•2) Cement antenna bobbin with wax after completing alignment.						
		SW2-RF ALIGNMENT					
(10)	SW2	Connect to test point ▼1 through ceramic capacitor (10 pF). Negative side to test point ▼2.	6.84 MHz	Tuning capacitor fully closed	Line out	L9 (SW2 OSC Coil)	Adjust for maximum output.
(11)	SW2		22.8 MHz	Tuning capacitor fully open	〃	CT8 (SW2 OSC Trimmer)	〃
(12)	SW2		7 MHz	Tune to signal.	〃	L6 (SW2 ANT Coil)	Adjust for maximum output.
(13)	SW2		22 MHz	Tune to signal.	〃	CT5 (SW2 ANT Trimmer)	Adjust for maximum output. Repeat steps (10)~(13).

■ FM ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR CONNECTIONS	SIGNAL GENERATOR or SWEEP GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
			FM-IF ALIGNMENT				
(1)	FM	High side thru. 0.001 µF to test point ▼9. Negative side to test point ▼10.	10.7 MHz (SWP.)	Point of non-interference. (on/ about 90 MHz)	Connect vert. amp. of scope to test point ▼7. Negative side to test point ▼8.	T1 (FM 1st IFT)	Adjust for maximum amplitude. (Refer to fig. 6).
(2)	FM	〃	〃	〃	〃	T3 (FM 2nd IFT)	Adjust for maximum amplitude. (Refer to fig. 7).
			FM-RF ALIGNMENT				
(3)	FM	Connect to test point ▼11 through FM dummy antenna. Negative side to test point ▼12.	86.2 MHz	Variable capacitor fully closed	Line out	L3 (FM OSC Coil)	(•3) Adjust for maximum output.
(4)	FM	〃	109.2 MHz	Variable capacitor fully open	〃	CT2 (FM OSC Trimmer)	〃
(5)	FM	〃	90 MHz	Tune to signal.	〃	L2 (FM ANT Coil)	〃
(6)	FM	〃	106 MHz	〃	〃	CT1 (FM ANT Trimmer)	(•3) Adjust for maximum output. Repeat steps (3)~(6).

(•3) Three output responses will be present: proper tuning is the center frequency.

■ SEPARATION ALIGNMENT

	ITEM	FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
(1)	Adjustment of pilot signal	98 MHz, 60 dB (CW) Connect to test point ▼11 through FM dummy antenna. Negative side to test point ▼12.	▼13 ... (+) ▼8 ... (−)	VR1	19 kHz	Adjust VR1, for 19 kHz (±150 Hz) reading on electronics counter.

■ AUDIO ADJUSTMENT

	ITEM	INPUT	MEASUREMENT POINT	SPECIFICATION	ADJUSTMENT POINT	REMARKS
(1)	Azimuth	QZZCAC (10 kHz, −20 dB)	Output meter across voice coil.	Maximum output	Azimuth screw (Refer to Fig. 5.)	Playback mode (FWD and REV Playback)
(2)	Playback Gain	QZZCLA (315 Hz, 0 dB)	Line Out	0.42 V ± 0.05 V	Tape 1 VR102 (Lch) VR202 (Rch) Tape 2 VR101 (Lch) VR201 (Rch)	Playback mode Dolby NR...IN
(3)	Erase current	Use metal tape.	▼2 ...(+) ▼1 ...(−)	185 mV ± 5 mV	VR301	Record mode Beat proof switch → II
(4)	Bias current	Use metal tape.	▼4 ...(Lch) ▼5 ...(Rch) ▼3 ...(−)	10.5 mV ± 0.3 mV	VR103 (Lch) VR203 (Rch)	Record mode Beat proof switch → I
(5)	Overall gain	CD/Line IN f = 1 kHz, −20 dB	Line Out	Output voltage ...0 ± 1 dB	VR104 (Lch) VR204 (Rch)	1. Apply a −20 dB 1 kHz signal from the line input terminal. 2. Measure the output voltage of line output terminals. 3. Then, with the unit in the record mode and, record the signal. 4. Playback the recorded part, and measure the output voltage of line output terminals. 5. Compare the output voltage measured in items 2 and 4, and adjust so there is no difference in the level. (Adjust to obtain 0 ± 1 dB.)

■ TAPE SPEED ADJUSTMENT

ITEM	FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	REMARKS
Tape speed adjustment for high speed. (Tape 1 & 2)	QZZCWAT (3 kHz)	LINE OUT	VR302 (Tape 1) VR304 (Tape 2)	(*4) 1. Short High speed switch terminal to enter the high speed mode. Tape 2 ... 6040 Hz ± 40 Hz Tape 1 ... −30 ± 30 Hz for tape speed of tape 2.
Tape speed adjustment for normal speed. (Tape 1 & 2)	QZZCWAT (3 kHz)	LINE OUT	VR303 (Tape 1) VR305 (Tape 2)	1. Open Q335 and set the tape speed to normal. 2. Tape 2 ... 3030 Hz ± 20 Hz Tape 1 ... −15 ± 15 Hz of the speed of tape 2.

(*4) To set to the High speed mode, short-circuit TP6-TP8 and TP7-TP8. Start both Tape 1 and Tape 2 in normal speed, and then short-circuit the High speed switch terminals after playback has begun.

Notes:

1. Adjust the tape speed by first adjusting the height speed. Do not adjust the height speed after adjusting the normal speed. (The normal speed changes if the height speed is adjusted afterwards)
2. Adjust the tape advance speed in the following order: tape 2 height, normal speed; tape 1 height, normal speed.

■ ALIGMENT POINT

* Please refer to Circuit Board and Wiring Connection Diagram which is located test point.

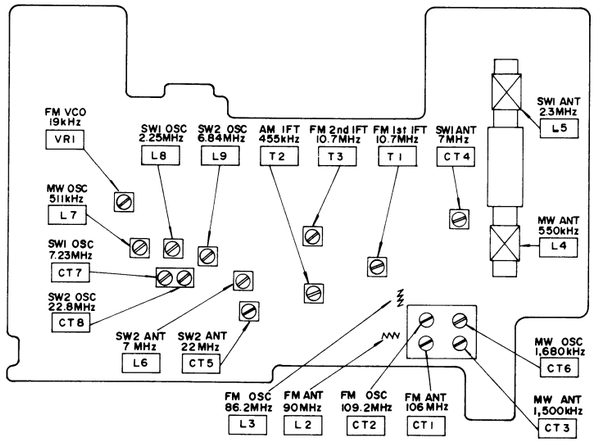


Fig. 1

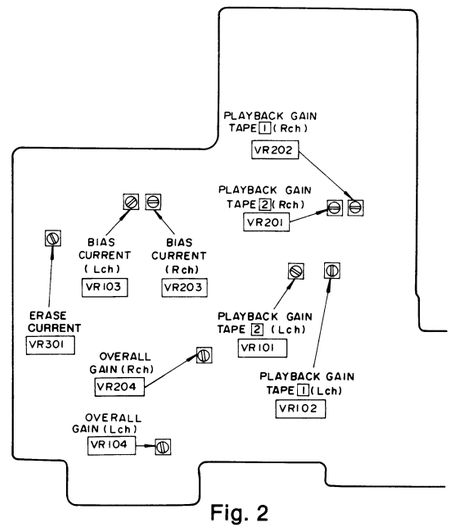


Fig. 2

REMARKS
djust for maximum mplitude. Refer to fig. 6).
djust for maximum mplitude. Refer to fig. 7).
*3) Adjust for maximum output.
〃
〃
3) Adjust for maximum output. Repeat steps (3)~(6).

REMARKS
for 19 kHz eading on electronics

MARKS
e / Playback)
e
tch → II
tch → I
0dB 1 kHz signal e input terminal. e output voltage ut terminals. he unit in the e and, record
e recorded part, e the output ne output
e output voltage n items 2 and 4, so there is no n the level. btain 0±1 dB.)

■ TAPE SPEED ADJUSTMENT

ITEM	FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	REMARKS
Tape speed adjustment for high speed. (Tape [1] & [2])	QZZCWAT (3 kHz)	LINE OUT	VR302 (Tape [1]) VR304 (Tape [2])	(*4) 1. Short High speed switch terminal to enter the high speed mode. Tape 2... 6040 Hz ± 40 Hz Tape 1... −30 ± 30 Hz for tape speed of tape 2.
Tape speed adjustment for normal speed. (Tape [1] & [2])	QZZCWAT (3 kHz)	LINE OUT	VR303 (Tape [1]) VR305 (Tape [2])	1. Open Q335 and set the tape speed to normal. 2. Tape 2... 3030 Hz ± 20 Hz Tape 1... −15 ± 15 Hz of the speed of tape 2.
(*4) To set to the High speed mode, short-circuit TP6-TP8 and TP7-TP8. Start both Tape [1] and Tape [2] in normal speed, and then short-circuit the High speed switch terminals after playback has begun.				

Notes:

1. Adjust the tape speed by first adjusting the height speed. Do not adjust the height speed after adjusting the normal speed. (The normal speed changes if the height speed is adjusted afterwards)
2. Adjust the tape advance speed in the following order: tape 2 height, normal speed; tape 1 height, normal speed.

■ ALIGMENT POINT

* Please refer to Circuit Board and Wiring Connection Diagram which is located test point.

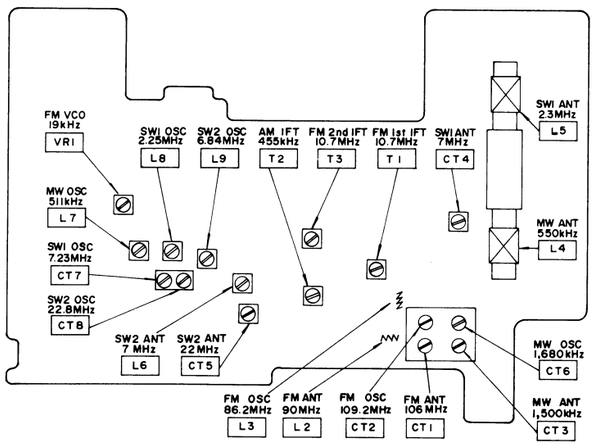


Fig. 1

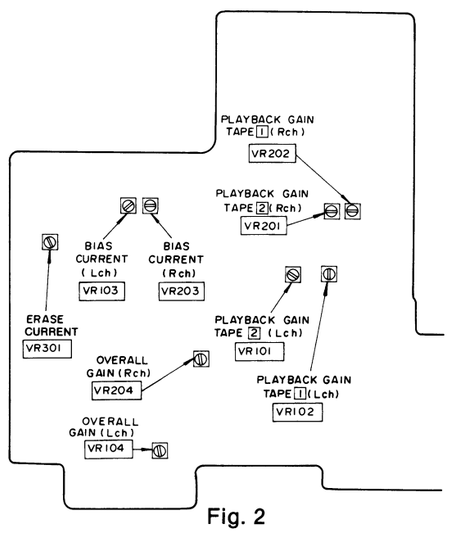


Fig. 2

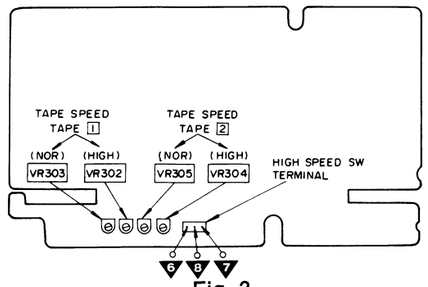


Fig. 3

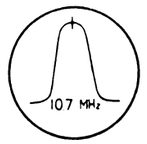


Fig. 6

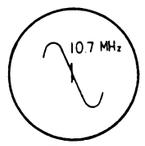


Fig. 7

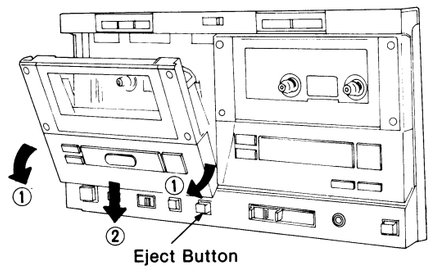


Fig. 4

•Removing Operation Cassette Blinder Panels [1] and [2]

1. Press the eject button.
2. Raise both sides of the operation cassette blinder panel gently in the direction indicated by ①, and then press downward in the direction indicated by ②.

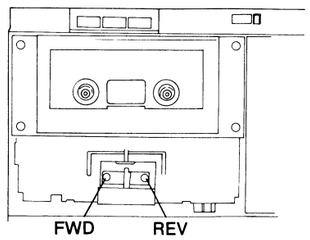
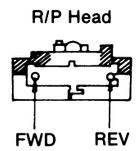


Fig. 5



WIRING CONNECTION DIAGRAM

MECHANISM CIRCUIT BOARD (TAPE 2)
CN901
TAPE 2 MOTOR
LINE OUT
J1(Lch) J2(Rch)
S4
J2
LINE OUT CIRCUIT BOARD
J5 DC IN
J4 AC IN
VOLTAGE SELECTOR
CS1
S1-1
POWER
POWER SUPPLY SWITCH CIRCUIT BOARD
POWER TRANSFORMER
T302
MECHANISM CIRCUIT BOARD (TAPE 1)
CN951
TAPE 1 MOTOR
POWER AMP CIRCUIT BOARD
CS41
CS49
AC - BATT
CS16
S2
DECK MAIN CIRCUIT BOARD
CP1
CP3
CP4-1
CP4-2
CS2
J2
CP8
CP7
CP9
CP5
CP6
CP13
CP15
CP12
CP14
CS6
CS5
CP11
CP10
DECK LED CIRCUIT BOARD (TAPE2)
CS15
DECK LED CIRCUIT BOARD (TAPE1)
CS14
TUNER AMPLIFIRE MAIN CIRCUIT BOAR
SPEAKERS
J12 (L ch)
J13 (R ch)
CD/LINE IN
PHONO
J10(L ch) J11(R ch)
J8(L ch) J9(R ch)
CS44
CS45
CS42
CP49
CS43
CP28
CP33
J7
PHONES
VR701
BALANCE
VR 451,551
VOLUME
S217 S218 S220 S219
(TAPE) (TUNER) (CD/LINE) (PHONO)
FUNCTION
BATT.15V (UM-1x10)
DC POWER SUPPLY CIRCUIT BOARD
CP31
W31
DECK OPERATION CIRCUIT BOARD (TAPE2)
CS11
DECK OPERATION CIRCUIT BOARD (TAPE1)
CS10
VR306
MIXING LEVEL
MIXING MIC
J3
PLAYBACK HEAD (TAPE2)
R/P HEAD ERASE HEAD (TAPE1)

WIRING CONNECTION DIAGRAM

6 7 8 9 10 11 12 13 14 15 16 17 18 19

POWER TRANSFORMER
T302
BRN
WHT
RED
BLU
ORG ORG BLU BLU
BRN
WHT
RED
BLU
PPLY
RCUIT BOARD

MECHANISM CIRCUIT BOARD
(TAPE1)
E F
CN951 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
TAPE1 MOTOR
H L + −
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
BLU
YEL

POWER AMP CIRCUIT BOARD

CS41 11 10 9 8 7 6 5 4 3 2 1
CS49 1 2
RED
YEL
1 2

GRAPHIC EQUALIZER
(14KHz) (7KHz) (3.3KHz) (1KHz) (330Hz) (100Hz) (63Hz)
VR407 VR507
VR406 VR506
VR405 VR505
VR404 VR504
VR403 VR503
VR402 VR502
VR401 VR501
CS43 11 10 9 8 7 6 5 4 3 2 1
CS23 1 2
BLK
YEL
S. ANALYZER/G.EQUALIZER AMP
CIRCUIT BOARD

BLK
RED
1 2
FM MODE LED CIRCUIT BOARD
CS24 3 2 1
BLU
BLU
YEL
3 2 1

TELESCOPIC
ANTENNA
EXT ANTENNA
CURCUIT BOARD
CS22 2 1
FM ANT
SW ANT
J72
CS28
PHONO
EARTH

TUNER AMPLIFIRE MAIN CIRCUIT BOARD
SPEAKERS
J12 (L ch) J13 (R ch)
CD/LINE IN
J10(L ch) J11(R ch)
PHONO
J8(L ch) J9(R ch)
15

YEL
BLK
1 2 3 4 5 6 7 8

BLU
YEL
CP13 1 2 3 4 5 6 7 8 9 10 11 12
CP12 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
CP14 1 2 3 4
1 2 3 CP15
CS6 8 7 6 5 4 3 2 1
CS5 9 8 7 6 5 4 3 2 1
5 4 3 2 1 CP11
5 4 3 2 1 CP10

1 2 3 4 5 CS44
YEL
BLK
1 2 3 4 5 6 7 8 CS45
11 10 9 8 7 6 5 4 3 2 1 CS42
CP49 1 2
CP28
11 10 9 8 7 6 5 4 3 2 1 CS43

1 2 3 4 5 6 7 8 CP45
3 2 1 CP24
CP23 1 2
1 2 CP21
1 2 CP22
S201 S206 S202 S203 S204 S205
(FM) (MW) (SW1) (SW2)
BAND SELECTOR
FM MODE
TUNER CURCUIT
BOARD

1 2 3 4 5 CP33
J7
PHONES
VR701
BALANCE
VR 451,551
VOLUME
S217 S218 S220 S219
(TAPE) (TUNER) (CD/LINE) (PHONO)
FUNCTION

1 2 CS21
BLK
RED
LAMP CIRCUIT BOARD

BLU
BLU
YEL
1 2 3 CS15
DECK LED CIRCUIT BOARD
(TAPE2)

4 3 2 1 CS14
YEL
BLU
DECK LED CIRCUIT BOARD
(TAPE1)

BATT.15V
(UM-1x10)
DC POWER SUPPLY
CIRCUIT BOARD
CP31 1 2
W31
R
RED
WHT
RED
1 2

(TAPE2)
DECK OPERATION CIRCUIT BOARD
CS11 1 2 3 4 5
YEL
BLU
1 2 3 4 5

(TAPE1)
DECK OPERATION CIRCUIT BOARD
CS10 1 2 3 4 5
YEL
BLU
1 2 3 4 5

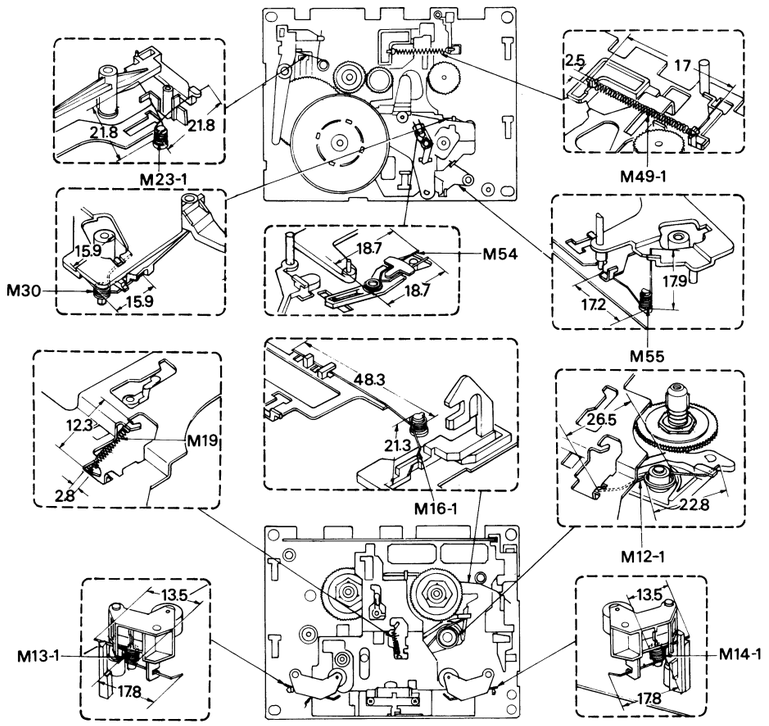
■ MECHANISM PARTS LIST (TAPE 2 PLAY SIDE SECTION)

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description
		MECHANICAL PARTS
M 1	**1MD0021ZA**	Head Block Ass'y
M 2	**RUA9029X**	Plate, Head Base
M 3	**RUB342Z**	Rod, Pinch Roller Change
M 4	**RUB347Z**	Arm, Take Up
M 5	**RDMG0002Z**	Reel Table Ass'y (Reverse)
M 6	**RDMG0001Z**	Reel Table Ass'y (Forward)
M 7	**RUB428Z**	Shaft, Plunger
M 8	**RUEG0005Z**	Plunger Ass'y
M 9	**RUB344Z**	Lever, Switch
M 10	**RDG5772Z**	Gear, Take Up Relay
M 11	**RUB353Z**	Rod, Brake
M 12	**RUBG0001Z**	Main Lever Ass'y
M 12-1	**RUW14Z**	Spring, Main Lever
M 13	**RUBG0007Z**	Pinch Roller Ass'y (Reverse)
M 13-1	**RUW13Z**	Spring, Pinch Roller (Reverse)
M 14	**RUBG0006Z**	Pinch Roller Ass'y (Forward)
M 14-1	**RUW12Z**	Spring, Pinch Roller (Forward)
M 15	**RUB343Z**	Lever, FF
M 16	**RUB469ZA**	Rod, Cassette Lock
M 16-1	**RUW17Z**	Spring, Cassette Lock Rod
M 17	**RUB341Z**	Rod, FR Change
M 18	**RUAG0001Z**	Mechanism Chassis Ass'y
M 19	**RUD9Z**	Spring, Head Base
M 20	**RFM101ZA**	Motor Ass'y
M 21	**RUL734Z**	Bracket, Flywheel
M 22	**RMD5001Z**	Spacer
M 23	**RUB350Z**	Lever, Main Control
M 23-1	**RUW10Z**	Spring, Main Control Lever
M 24	**RDG5776Z**	Gear, Main
M 25	**RDWG0001Z**	Flywheel Ass'y (Forward)
M 25-1	**QBK92049**	Washer, Flywheel (Forward)
M 26	**RDWG0002Z**	Flywheel Ass'y (Reverse)
M 26-1	**QBW2099**	Washer, Flywheel (Reverse)

Ref. No.	Part No.	Part Name & Description
M 27	**RDV43Z**	Belt, Main
M 28	**RUB346Z**	Arm, FF
M 29	**RUB348Z**	Lever, FF Arm Spring
M 30	**RUW9Z**	Spring, FF Arm
M 31	**RUB354Z**	Arm, FR Select
M 32	**RUBG0003Z**	FR Rod Ass'y
M 33	**RDGG0003Z**	Reel Table Gear Ass'y
M 44	**RDG5773Z**	Gear, FF
M 45	**RDG5769Z**	Gear, Reel Table
M 46	**RUQ10Z**	Spring, Back Tension
M 47	**RDRG0001Z**	Main Pulley Ass'y
M 48	**RDV42Z**	Belt, FF
M 49	**RUB349Z**	Lever, Sub Control
M 49-1	**RUD8Z**	Spring, Sub Control Lever
M 50	**RUS609Z**	Spring, Cassette Pressure
M 51	**RDG5775ZC**	Gear, Sub
M 52	**RUBG0004Z**	FF Rod Ass'y
M 52-1	**RUB345Z**	FF Select Rod
M 53	**RUB359Z**	Lever, Take Up Change
M 54	**RUW15Z**	Spring, Take Up Change
M 55	**RUW8Z**	Spring, FF Rod
M 100	**XTW2+8S**	Screw ⊕2×8 (Circuit Board M'tg)
M 101	**XTW2+8L**	Screw ⊕2×8 (Head Block M'tg)
M 102	**XTW2+5L**	Screw ⊕2×5 (Head Block M'tg)
M 103	**XTN26+7J**	Screw ⊕2.6×7 (Flywheel Bracket M'tg)
M 104	**XYC2+JF16**	Screw ⊕2×16 (Circuit Board M'tg)
M 105	**XTW26+8S**	Screw ⊕2.6×8 (Circuit Board M'tg)
M 106	**QHQ1303**	Screw, Motor Ass'y M'tg
M 107	**RUQ30Z**	Spring, Cushion
M 108	**RNL1Z**	Arm, Damper
M 109	**RHG3032Z**	Rubber Cushion, Motor Ass'y

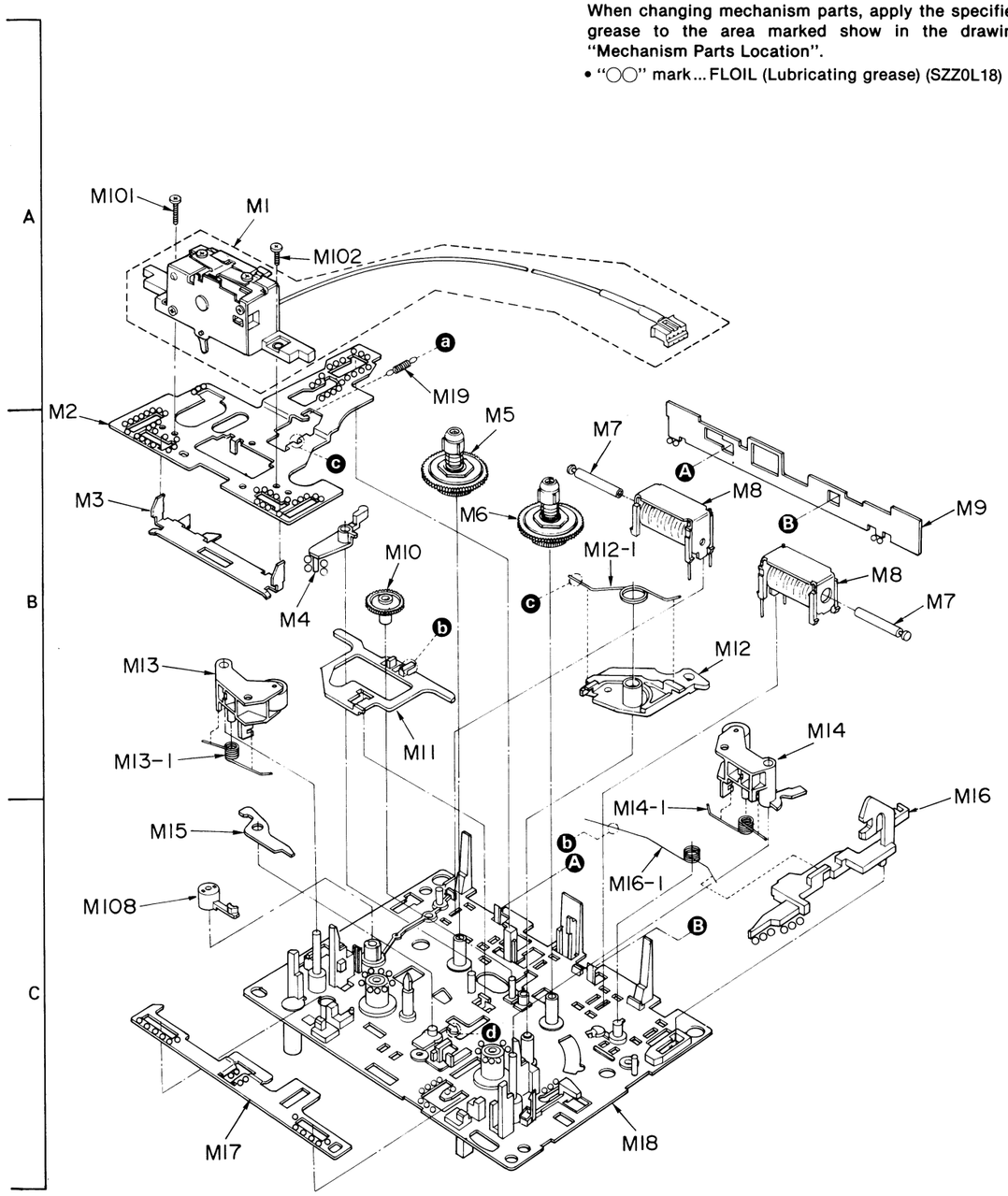
SPRING LOCATION



MECHANISM PARTS LOCATION (TAPE 2

(Top View)

Notes:
When changing mechanism parts, apply the specified grease to the area marked show in the drawing "Mechanism Parts Location".
• "○○" mark... FLOIL (Lubricating grease) (SZZ0L18)

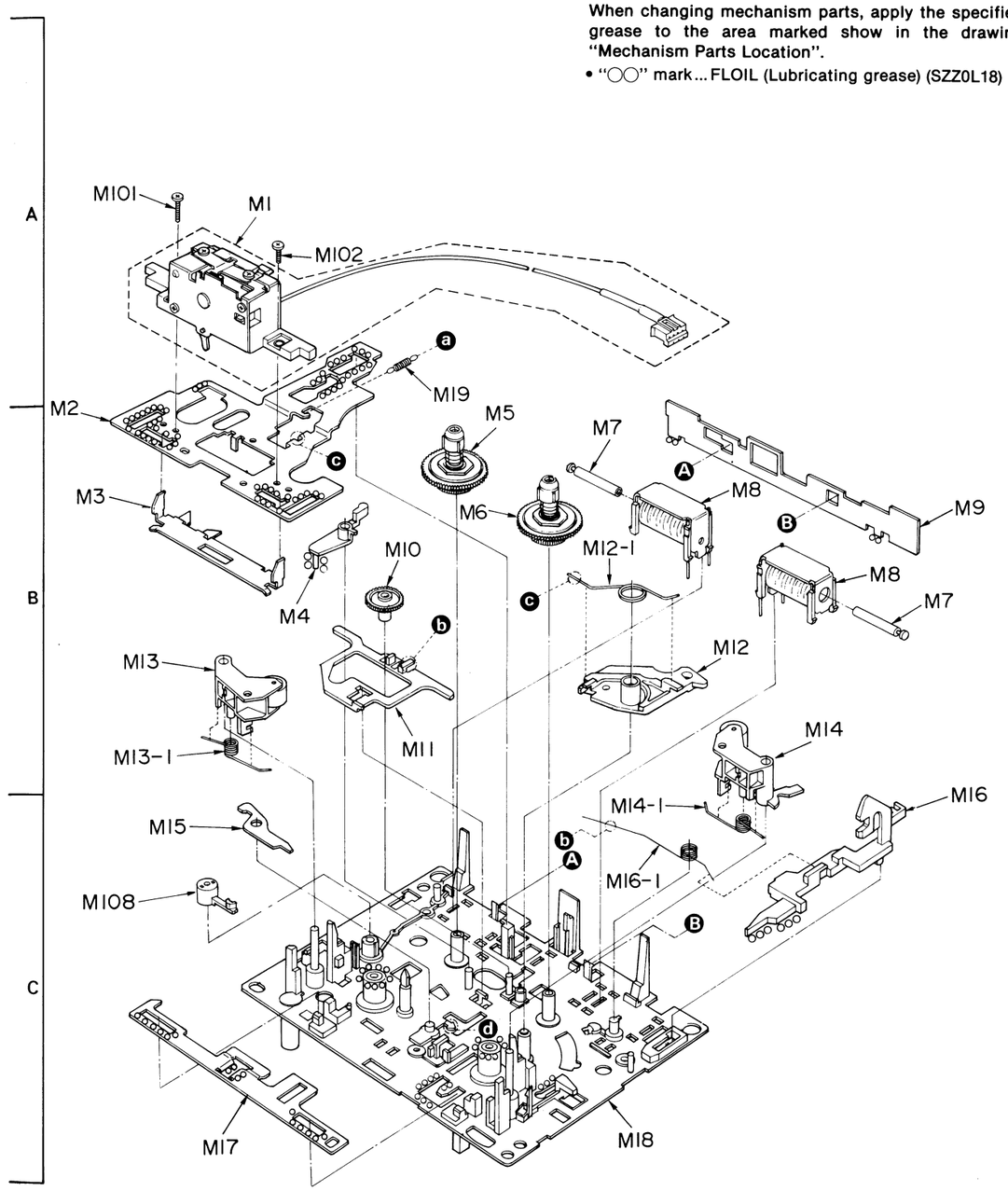


| | | |

MECHANISM PARTS LOCATION (TAPE 2 PLAY SIDE SECTION)

(Top View)

Notes:
When changing mechanism parts, apply the specified grease to the area marked show in the drawing "Mechanism Parts Location".
- "○○" mark... FLOIL (Lubricating grease) (SZZ0L18)

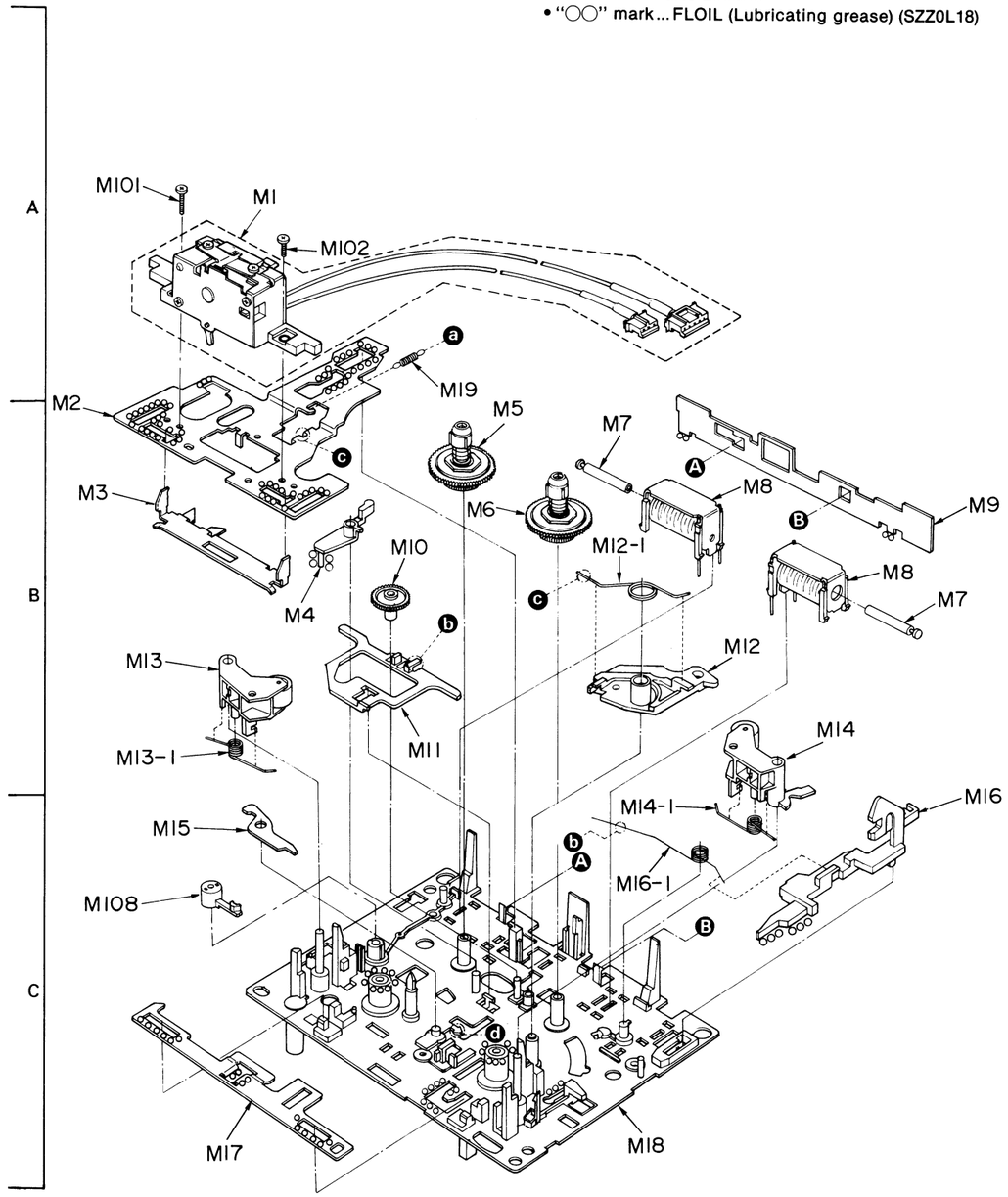


| | | |

MECHANISM PARTS LOCATION (TAPE [1] R/P SIDE SECTION)

(Top View)

Notes:
When changing mechanism parts, apply the specified grease to the area marked show in the drawing "Mechanism Parts Location".
• "○○" mark... FLOIL (Lubricating grease) (SZZ0L18)



| | | |

OCATION (TAPE 1 R/P SIDE SECTION)

specified
drawing

ZZ0L18)

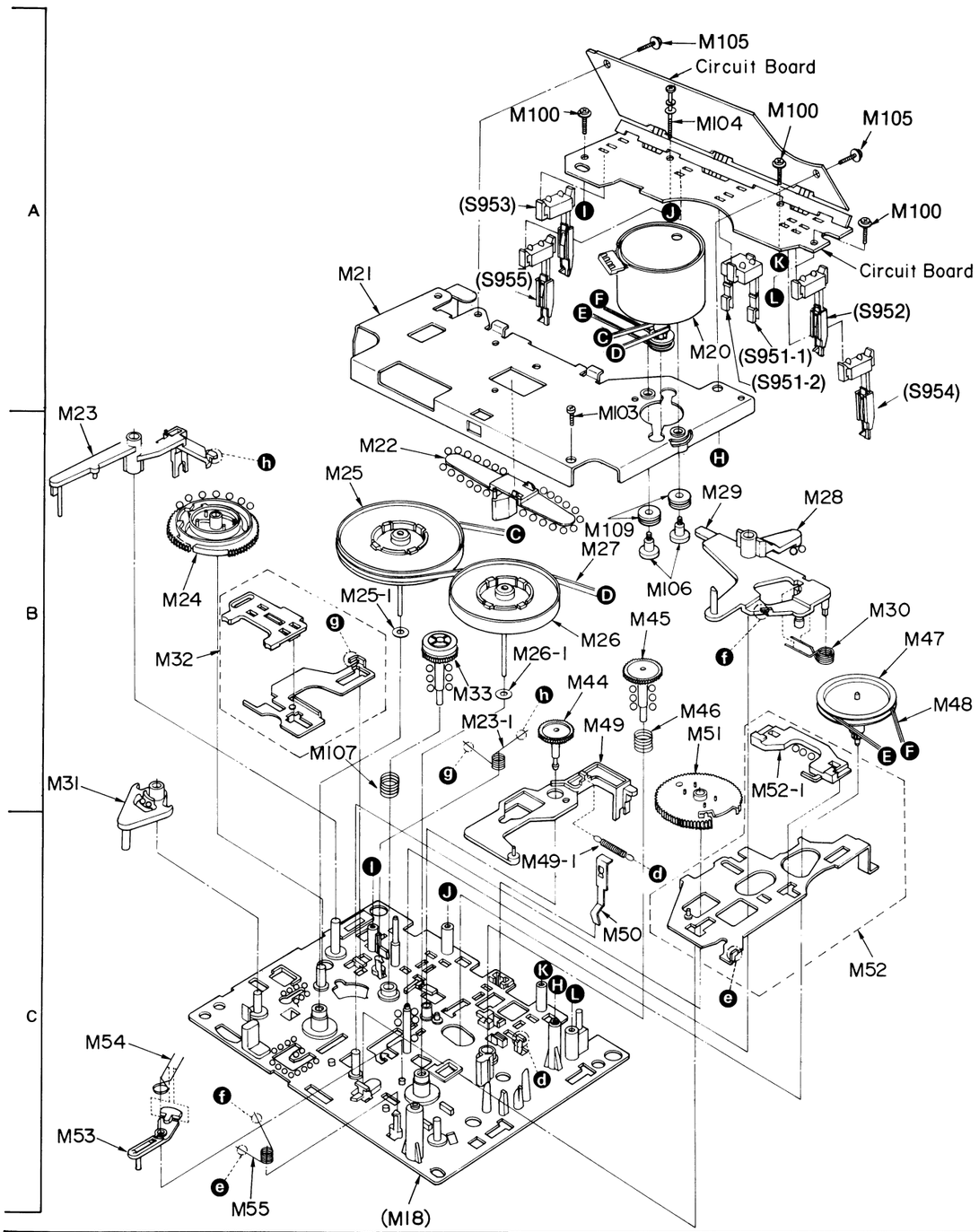
M9

M7

M16

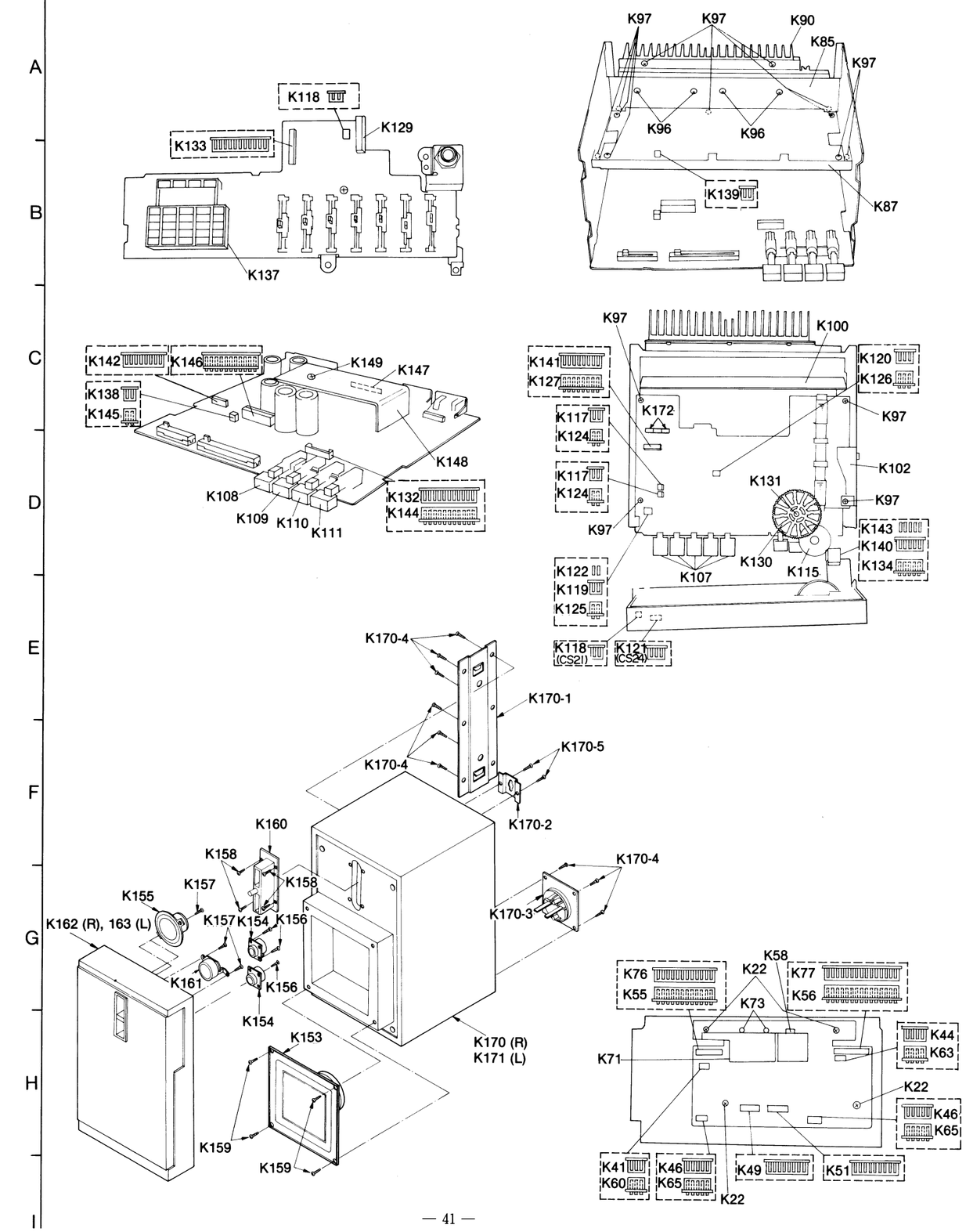
7 16 9

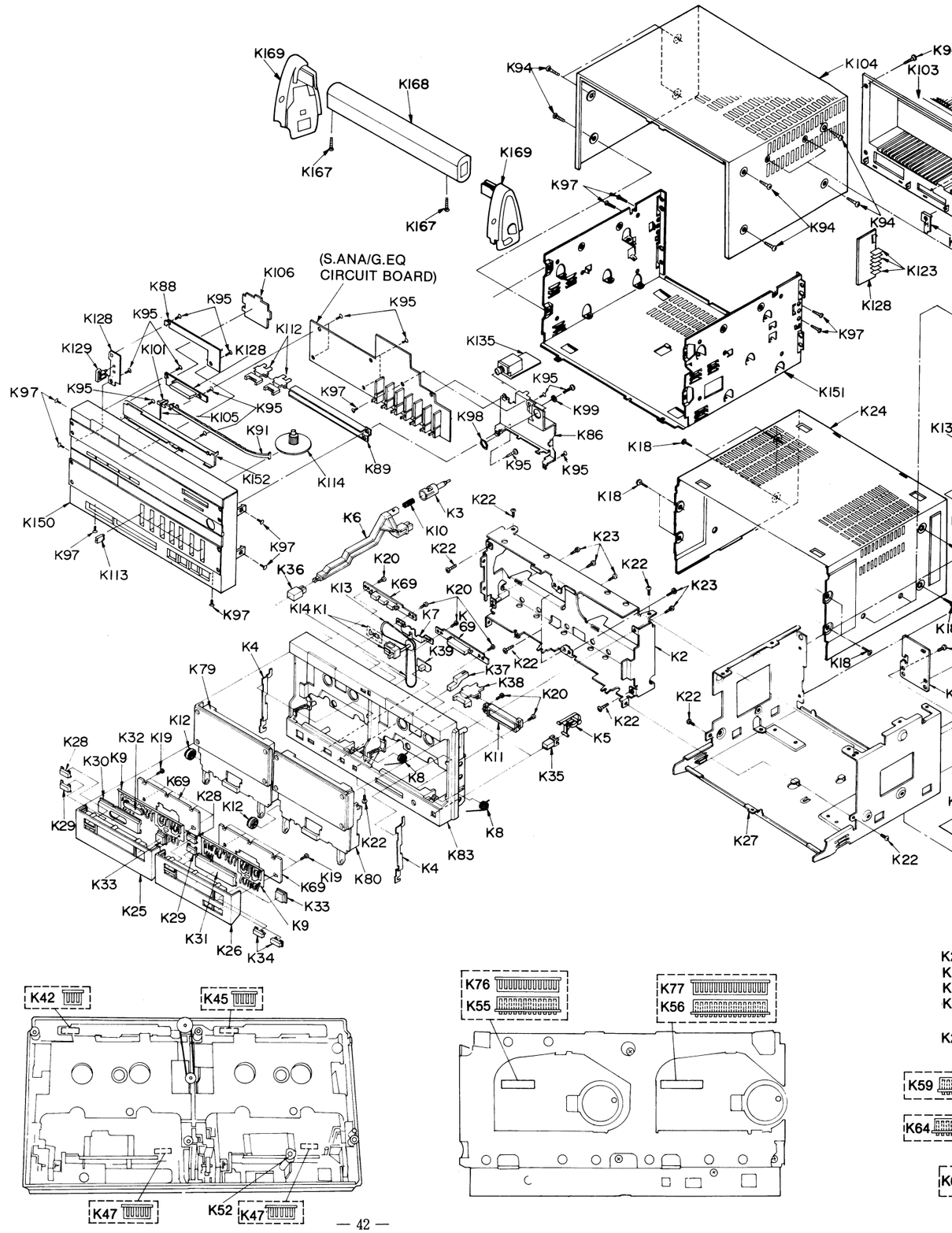
(Rear View)

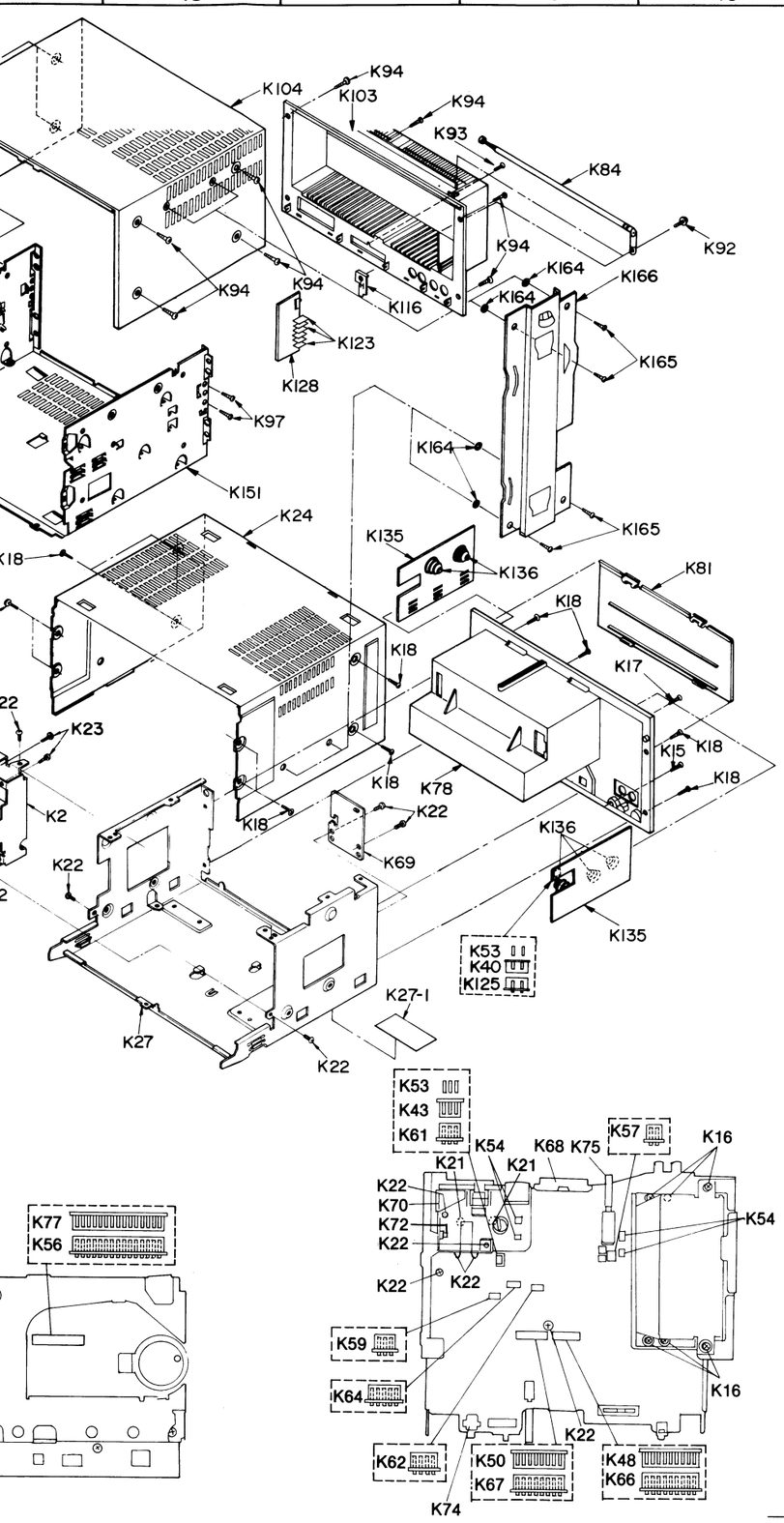


| | | |

CABINET PARTS LOCATION







Notes:

1. The letter in round brackets in the Ref. No. column indicates the shipping destination.
   (X) .....For Asia, Latin America, Middle East and Africa areas.
   (XC).....For Saudi Arabia.
2. The letter in square brackets in the Ref. No. column indicates the color of the product.
   Ⓚ...Black, Ⓡ...Red, Ⓢ...Silver

REPLACEMENT PARTS LIST

Important safety notice
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

Ref. No.	Part No.	Part Name & Description
		CABINET PARTS
K 1	**RSE219ZA**	Counter
K 2	**RUA748ZA**	Angle, Mechanism Coupling
K 3	**RUB438Z**	Rod B, Power Switch
K 4	**RUB465ZA**	Lever, Eject A
K 5	**RUB466ZA**	Lever, Eject B
K 6	**RUB467ZA**	Rod A, Power Switch
K 7	**RUL895ZA**	Angle, Counter
K 8	**RUW101ZA**	Spring, Eject
K 9	**RUS706ZA**	Spring, Operation Button
K 10	**RUQ40Z**	Spring, Power Switch Rod B
K 11	**RMR120Z**	Angle, Mixing Level Knob Ⓚ
K 12	**RDG5709Z**	Gear, Damper
K 13	**QDB0284**	Belt (A), Counter
K 14	**QDB0329A**	Belt (B), Counter
K 15	**XSB3 + 6FZ**	Screw ⊕3 × 6 (Rear Cabinet M'tg)
K 16	**XYN4 + F8**	Screw ⊕4 × 8 (Power Transformer M'tg)
K 17	**XTB3 + 12CFZ**	Tapping Screw ⊕3 × 12 (Rear Cabinet M'tg)
K 18	**XTB3 + 8CFZ**	Screw ⊕3 × 8 (Rear Cabinet Case Cover M'tg)
K 19	**XTN2 + 5J**	Tapping Screw ⊕2 × 5 (Operation P.C.B M'tg)
K 20	**XTN2 + 8J**	Tapping Screw ⊕2 × 8 (LED P.C.B, Mix Level Knob M'tg)
K 21	**XTN3 + 4F**	Tapping Screw ⊕3 × 4 (AC/DC Power Switch Angle M'tg)
K 22	**XTV3 + 6F**	Tapping Screw ⊕3 × 6 (Power Switch, Mechanism, etc. M'tg)
K 23	**XTV3 + 8G**	Tapping Screw ⊕3 × 8 (Mechanism Coupling Angle M'tg)
K 24	**RKE572ZA**	Case Cover Ⓚ
K 25	**RGK1298YA**	Panel, Operation Ⓚ
K 26	**RGK1299ZA**	Panel, Operation
K 27	**RYF2XXE570FX**	Deck Bottom Cabinet Ass'y
K 27-1 (X)	**RGT1270ZA**	Name Plate Ⓚ
K 27-1 (XC)	**RGT1270YA-0**	Name Plate Ⓚ
K 28	**RBC1048ZA**	Button, Rew Ⓢ
K 29	**RBC1049ZA**	Button, FF Ⓢ
K 30	**RBC1050ZA**	Button, Playback (A) Ⓢ
K 31	**RBC1051ZA**	Button, Playback (B) Ⓢ
K 32	**RBC1052ZA**	Button, Record Ⓡ
K 33	**RBC1053ZA**	Button, Stop Ⓢ
K 34	**RBC1054ZA**	Button, Editing Speed Ⓢ
K 35	**RBC1055ZA**	Button, Eject Ⓚ
K 36	**RBC971Z**	Button, Power Switch Ⓢ
K 37	**RBC986YA1**	Button, Dolby NR
K 38	**RBD406Z**	Knob, Mixing Level Ⓚ
K 39	**RBD450ZA**	Knob, Reverse Mode Ⓚ
K 40	**RJS2L3Z**	Socket (2P/CP31)
K 41	**RJS3L16ZA-X**	Socket (3P/CP15)
K 42	**RJS3L18Z**	Socket (3P/CS15)
K 43	**RJS3L3Z**	Socket (3P/CP1)
K 44	**RJS4L16Z**	Socket (4P/CP14)
K 45	**RJS4L18Z**	Socket (4P/CS14)
K 46	**RJS5L16Z**	Socket (5P/CP10, CP11)
K 47	**RJS5L18Z**	Socket (5P/CS10, CS11)
K 48	**RJS8L13Z**	Socket (8P/CP6)
K 49	**RJS8L17Z**	Socket (8P/CS6)
K 50	**RJS9L13ZA-X**	Socket (9P/CP5)
K 51	**RJS9L17ZA-X**	Socket (9P/CS5)
K 52	**RJT514Z**	Lug Terminal
K 53	**RJT707Z**	Terminal, Socket
K 54	**RJF28Z**	Holder, Fuse ⚠
K 55	**RJP12G18ZA**	Plug (12P/CP13, CN901)
K 56	**RJP15G18ZA**	Plug (15P/CP12, CN951)
K 57	**RJP2G4Y**	Plug (2P/CP3)
K 58	**RJP3G1Z**	Plug (3P/TP1)
K 59	**RJP3G10Z**	Plug (3P/CP9)
K 60	**RJP3G20ZA**	Plug (3P/CP15)
K 61	**RJP3G4Y**	Plug (3P/CP1)
K 62	**RJP4G10Z**	Plug (4P/CP7)
K 63	**RJP4G20Z**	Plug (4P/CP14)
K 64	**RJP5G10Z**	Plug (5P/CP8)
K 65	**RJP5G20Z**	Plug (5P/CP10, 11)
K 66	**RJP8G18Z**	Plug (8P/CP6)
K 67	**RJP9G18ZA**	Plug (9P/CP5)
K 68	**RJS15L12Z**	Socket (15P/CS16)
K 69	**RUP2206ZAN**	P.C.B (LED, Beat Proof, etc.)
K 70	**RUB440Z**	Angle, AC/DC Power Switch
K 71	**RMY232ZA**	Heat Sink
K 72	**XSN2 + 6**	Screw (Leaf Switch M'tg)
K 73	**XTV3 + 8F**	Screw (Transistor M'tg)
K 74	**RHR1323Z**	Holder, LED
K 75	**RBC996Z**	Button, AC/DC Selector Ⓡ
K 76	**RJS12L13ZA-X**	Socket (12P/CS13, CN901)
K 77	**RJS15L13ZA-X**	Socket (15P/CS12, CN951)
K 78	**RYF1XXE570FX**	Deck Rear Cabinet Ass'y Ⓚ
K 79	**RYQ1XXE570FX**	Cassette Compartment [L] Ass'y Ⓚ
K 80	**RYQ2XXE570FX**	Cassette Compartment [R] Ass'y Ⓚ
K 81	**RYN1XXE570FX**	Battery Cover Ass'y Ⓚ
K 83	**RYM1XXE520FX**	Deck Front Cabinet Ass'y
K 84	**XEARR175FBY**	Telescopic Antenna
K 85	**RUL820Z**	Angle, Power IC
K 86	**RUL886ZA**	Angle, EQ. P.C.B
K 87	**RUL889ZA**	Angle, Reinforcement
K 88	**RUL912ZA**	Angle, LED P.C.B
K 89	**RMR119Z**	Rail, Slide Knob
K 90	**RMY215ZA-S**	Heat Sink
K 91	**RDE142X**	Rack
K 92	**XYN3 + F15FY**	Screw (Telescopic Antenna M'tg)
K 93	**XTB3 + 12CFZ**	Screw (Rear Cabinet M'tg)
K 94	**XTB3 + 8CFZ**	Screw (Rear Cabinet, etc. M'tg)
K 95	**XTV3 + 10G**	Screw (GE P.C.B Angle, etc. M'tg)
K 96	**XTV3 + 18G**	Screw (Power IC M'tg)
K 97	**XTV3 + 6F**	Screw (Main P.C.B Front Cabinet, etc. M'tg)
K 98	**XNS12D**	Nut (Headphones Jack M'tg)
K 99	**XWA3B**	Washer (G. EQ P.C.B)
K 100	**RHR1322Z**	Shield Barriar
K 101	**RHR1330ZA**	Holder, Dial Pointer
K 102	**RHR1336ZA**	Bracket, Tuner P.C.B
K 103	**RKF828WA**	Tuner Rear Cabinet Ⓚ
K 104	**RKE548ZB**	Tuner Top Case Cabinet Ⓚ
K 105	**RDP332ZA**	Dial Pointer Ⓢ
K 106	**RGP1106ZA**	Sheet, S. Analyzer Diffusion
K 107	**RBC1047ZA**	Button, Band Select Ⓚ
K 108	**RBC981Z**	Button, Function (Tape) Ⓢ
K 109	**RBC982Z**	Button, Function (Tuner) Ⓢ
K 110	**RBC983Z**	Button, Function (CD/Lline) Ⓢ
K 111	**RBC984Z**	Button, Function (Phono) Ⓢ
K 112	**RBD406Z**	Knob, Volume, Balance Ⓚ
K 113	**RBD408YA**	Knob, G. EQ Ⓢ
K 114	**RBT288ZA-0**	Knob, Tuning Ⓚ
K 115	**RBT289ZA-0**	Knob, Fine Tuning Ⓚ
K 116	**RJT1054Z**	Terminal, Earth
K 117	**RJS2L16ZA-X**	Socket (2P/CP21, CP23)
K 118	**RJS2L18Z**	Socket (2P/CS21, CS23)
K 119	**RJS2L3Z**	Socket (2P/CP22)
K 120	**RJS3L16ZA-X**	Socket (3P/CP24)
K 121	**RJS3L18Z**	Socket (3P/CS24)
K 122	**RJT707Z**	Terminal, Socket
K 123	**RJF1095Z**	Terminal, Antenna
K 124	**RJP2G20ZA**	Plug (2P/CP21, CP23)
K 125	**RJP2G4Y**	Plug (2P/CP22, CP31)
K 126	**RJP3G20ZA**	Plug (3P/CP24)
K 127	**RJP8G18Z**	Plug (8P/CP45)
K 128	**RUP2200ZAN**	P.C.B (Antenna, LED, Lamp)
K 129	**RMP260ZA**	Holder, Lamp
K 130	**RDG5778Z**	Gear, Drum
K 131	**XYN26 + C6**	Screw (Drum Gear M'tg)
K 132	**RJS11L13Z**	Socket (11P/CP43)
K 133	**RJS11L17ZA-X**	Socket (11P/CS43)
K 134	**RJP5G2Z**	Plug (5P/CP33)
K 135	**RUP2201ZAN**	P.C.B (Headphones, Battery)
K 136	**RJC511Z**	Battery Spring (–)
K 137	**RMP262ZA**	Holder, LED
K 138	**RJS2L13Z**	Socket (2P/CP49)
K 139	**RJS2L17Z**	Socket (2P/CS49)
K 140	**RJS5L2Z**	Socket (5P/CP33)
K 141	**RJS8L13Z**	Socket (8P/CP45)
K 142	**RJS8L17Z**	Socket (8P/CS45)
K 143	**RJT462Y**	Terminal, Socket
K 144	**RJP11G18Z**	Plug (11P/CS43)
K 145	**RJP2G18Z**	Plug (2P/CS49)
K 146	**RJS11T3Z**	Socket (11P/CS42)
K 147	**RJS15L12Z**	15P Flat Connector
K 148	**RMY228Z**	Heat Sink
K 149	**XTV3 + 12F**	Screw (Heat Sink M'tg)
K 150	**RYM2XXE550FX**	Tuner Front Cabinet Ass'y Ⓚ
K 151	**RYM2XXE520FX**	Tuner Body Cabinet Ass'y
K 152	**RYDXXE500FX**	Dial Block Ass'y Ⓚ
K 153	**EAS12SL04A**	Speaker, Woofer
K 154	**EAS2HH01SB**	Speaker, Tweeter
K 155	**EAS5PH09T**	Speaker, Squawker
K 156	**XTN26 + 10J**	Screw (Tweeter M'tg)
K 157	**XTV3 + 8G**	Screw (Tweeter Horn, Squawker M'tg)
K 158	**XMM31 + 13**	Screw (Bass Reflex Port M'tg)
K 159	**XMM31 + 16**	Screw (Woofer M'tg)
K 160	**RHR3085Z**	Bass Reflex Port
K 161	**RGX1603ZA**	Tweeter Horn Ⓚ
K 162	**RYP2XXE550FX**	Speaker Panel (R) Ass'y Ⓚ
K 163	**RYP3XXE550FX**	Speaker Panel (L) Ass'y Ⓚ
K 164	**RNW351Z**	Washer (Connecting Bracket)
K 165	**RHK22Z**	Screw (Connecting Bracket M'tg)
K 166	**RKE551ZB**	Bracket, Connection Ⓚ
K 167	**XTC3 + 10CFN**	Screw (Handle M'tg)
K 168	**RKX360Z**	Handle Ⓚ
K 169	**RYHXXE550FX**	Handle Arm Ass'y Ⓢ
K 170	**RKF9035Z**	Speaker Box (R) Ass'y Ⓚ
K 170-1	**RKE550Z**	Angle, Speaker Box Ⓚ
K 170-2	**RGE99ZA**	Bracket, Speaker Box Ⓢ
K 170-3	**SJFS5204**	Terminal, Speaker
K 170-4	**XMC31 + 13FZ**	Screw ⊕3.1 × 13 (Speaker Box Angle, Speaker Terminal M'tg)
K 170-5	**XMMR31 + 13FY**	Screw ⊕3.1 × 13 (Speaker Box Braket M'tg)
K 171	**RKF9035Y**	Speaker Box (L) Ass'y Ⓚ
K 172 (XC)	**QTF1054**	Holder, Fuse ⚠
		ACCESSORIES
A 1	**RQX4903YA**	Operating Instructions
A 2	**RJP0G4Z**	Flat Cable
A 3	**RJP120ZS**	AC Plug Adaptor ⚠
A 4	**RJE175XA**	Speaker Cord
A 5 (X)	**RJA21Z**	AC Power Cord ⚠
A 5 (XC)	**RJA103ZA-K**	AC Power Cord ⚠
A 6	**RJN48Z**	Cassette Tape
		PACKINGS
P 1	**RPH551ZA**	Soft Cover (Deck)
P 2	**RPE569YA**	Handle
P 3	**RPH534YA**	Soft Cover (Speaker)
P 4	**RPN9533YA**	Pad
P 5	**RPK2398ZA**	Gift Box
P 6	**XZB10X35A04**	Polyethylene Cover

ELECTRICAL REPLACEMENT PARTS LIST

Numbering System of Resistor

Example:

ERD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value (100Ω)

ERJ	6G	C	J	2R2
Type	Wattage	Shape	Tolerance	Value (2.2Ω)

Numbering System of Capacitor

Example:

ECKD	1H	102	Z	F
Type	Voltage	Value (1000pF)	Tolerance	Peculiarity

ECEA	50	M	R47
Type	Voltage	Peculiarity	Value (0.47μF)

Resistor Type		Wattage	Tolerance
ERD:	Carbon Resistor	10 : 1/8W	F : ±1%
ERC:	Solid Resistor	25 : 1/4W	G : ±2%
ERF:	Incombustible Box-Shaped Wire-Wound Resistor	50 : 1/2W	J : ±5%
		18 : 1/8W	K : ±10%
		14 : 1/4W	H : ±20%
		12 : 1/2W	
ERG:	Metal Oxide-Film Resistor	1 : 1W	
		2 : 2W	
ERM:	Wire-Wound Resistor	3 : 3W	
		S1 : 1/2W	
ERO:	Superstable Metal Film Resistor	S2 : 1/4W	
		6G : 1/10W	
		8G : 1/8W	
ERX:	Metal-Film Resistor		
RRJ: / ERJ:	Chip Resistor		

Capacitor Type		Voltage	Tolerance
ECCD:	Ceramic Capacitor (Chitacon)	(ECCD, ECKD Type) 1H : 50V DC 2H : 500V DC	K : ±10%
ECKD:	Ceramic Capacitor (Chitabari)	(ECFD Type) C : 12V DC D : 25V DC	M : ±20%
ECFD:	Semiconductor Ceramic Capacitor	E : 50V DC	Z : +80% −20
ECE□:	Electrolytic Capacitor	(ECQ Type) 05 : 50WV DC 1 : 100WV DC	J : ±5%
ECS□:	Tantalum Fixed Electrolytic Capacitor	(ECE, ECS Type) 0G : 4V 0J : 6.3V 1A : 10V 1C : 16V 1E : 25V 1V : 35V 1H : 50V 1J : 63V 2A : 100V	G : ±2% F : ±1% C : ±0.25pF D : ±0.5pF F : ±1pF
ECQ□:	Polystyrenc Film Capacitor		
ECQS:	Polystyrene Film Capacitor		
ECQS:	Polypropylene Film Capacitor		
ECQV:	T.F Capacitor		
ECU□: / RCU□:	Chip Capacitor		
ECBT:	Cylindrical Ceramic Capacitor		

※ Capacity are in microtarads (μF) unless specified otherwise, P=Pico-farads.
※ Resistance are in ohms (Ω), unless specified otherwise, 1K=1,000Ω, 1M=1,000KΩ

REPLACEMENT PARTS LIST

Important safety notice
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When replacing any of these components, use only manufacturer's specified parts.

(X)...For Asia, Latin America, Middle East and Africa areas. (XC)...For Saudi Arabia

Ref. No.	Part No.
CAPACITORS	
C 1	**RCBS1H120JC**
C 2	**RCBS1H100JC**
C 3	**RCBS1H5R6KC**
C 4, 7, 12, 14, 21	**RCBS1H102KB**
C 5, 11	**RCBS1H3R9KC**
C 6, 10	**RCBS1H220JC**
C 8	**RCBS1H180JC**
C 9	**RCBS1H470JL**
C 13	**ECFT1C473MD**
C 15	**RCBS1H2R2KC**
C 16, 28	**ECEA1CU100**
C 18, 19, 26, 29, 41, 42	**ECFT1C223MD**
C 20	**RCBS1H331KB**
C 22	**ECEA0JU221B**
C 23, 24	**ECEA1HU4R7B**
C 25, 49, 51	**RCBS1C103NY**
C 27	**RCBS1C472MX**
C 30	**ECQP2A361JZ**
C 32	**ECQP2A152JZ**
C 33, 35	**RCBS1H6R8KC**
C 34	**ECQP2A472JZT**
C 36	**RCBS1H150JC**
C 38	**ECFT1C333MD**
C 39, 40, 44	**ECEA1HU010**
C 43	**ECFT1C153MD**
C 45	**ECEA1HU0R1B**
C 46	**ECQG1H102KZT**
C 47	**ECEA0JU101B**
C 48	**ECEA1AU101B**
C 101, 102, 201, 202	**RCBS1H331KB**
C 103, 203	**RCBS1H681KB**
C 104, 111, 123, 138, 211, 223, 238, 347	**ECEA1HU010**
C 105, 128, 228, 306	**ECEA1HU0R1B**
C 106, 136, 206, 236	**ECFT1C333KDY**
C 108, 208, 350, 360	**ECEA0JU221B**
C 109, 122, 126, 131, 142, 144, 209, 222, 226, 231, 242, 244, 304, 313, 316, 335, 348, 349, 362, 371	**ECEA1CU100B**
C 110, 210	**ECQV1H224JZ**
C 112, 212	**ECFT1C103KD**
C 113, 132, 213, 232	**RCBS1C472KX**
C 114, 120, 124, 143, 214, 220, 224, 243	**RCBS1H102KB**
C 115, 215	**ECQG1H562KZT**
C 116, 216	**ECCT1H470KC**
C 121, 133, 221, 233	**RCBS1H101KB**
C 125, 134, 135, 139, 141, 225, 234, 235, 239, 241, 305, 312, 352, 355, 356	**ECEA1EU4R7**
C 129, 229, 310, 311	**ECEA1HUR33B**
C 130, 230	**ECFT1C473KD**
C 140, 240	**ECEA1EN4R7SB**
C 204	**ECEA1HU010E**
C 205	**ECEA1HU0R1E**
C 301	**ECFT1C103MD**
C 302	**ECEA1HUR22B**
C 303	**RCBS1C682MX**
C 307, 314	**ECEA1AU330B**
C 308, 318, 323, 336, 354	**ECEA1AU101B**
C 309, 320, 328, 329, 330, 345, 361, 372	**RCBS1C103NY**
C 315, 319, 346, 351	**ECEA1AU221B**
C 321	**ECQP2A152JZ**
C 322	**ECQP2A153JZ**
C 324	**ECFT1C473MD**
C 325, 326	**ECKT1H222MD**
C 331 (X)	**QCKF103ZA250⚠**
C 331 (XC)	**ECKDNS103ZVH⚠**
C 332 (X)	**ECEA1EU222**
C 332 (XC)	**ECEA1ESS332E**
C 334	**ECEA1AU470**
C 341, 342, 343, 344	**ECKT1H103ZF**
C 353	**ECEA0JU471**
C 358	**ECEA1CU101B**
C 359	**ECEA1CU221**
C 365, 368	**ECQP2A822JZ**
C 366, 370	**ECEA0JU470**
C 369	**ECFT1C683MD**
C 401, 403, 501, 503	**ECEA1HKR33B**
C 402, 407, 410, 502	**ECEA1HK010B**
C 404, 412, 504, 512, 604	**ECFT1C473MD**
C 405, 413, 414, 505, 513, 514, 607	**ECFT1C103MD**
C 406, 506, 616	**ECEA1HUR22B**
C 408, 419, 508, 519	**RCBS1H471KB**
C 409, 507, 509, 510, 603, 606, 609, 612, 615	**ECEA1HU010**
C 411, 511	**ECEA1CK100B**
C 415, 515, 610	**RCBS1C332MX**
C 416, 516	**RCBS1C682MX**
C 417, 517, 478, 578	**RCBS1H102KB**
C 418, 518	**RCBS1C472MX**
C 420, 520	**ECEA1CU100**
C 451, 457, 462, 474, 551, 557, 562, 574, 740	**ECEA1HU010**
C 452, 552	**ECCT1H101K**
C 453, 553	**ECEA0JU470**
C 454, 554	**ECFT1C103MD**
C 455, 555	**ECFT1C333MD**
C 456, 556	**ECEA1EU3R3B**
C 458, 460, 463, 465, 471, 473, 558, 560, 563, 565, 571, 573	**ECKT1H102MD**
C 459, 559, 730	**ECEA1CU100**
C 461, 561	**ECEA1HU0R1B**
C 464	**ECEA1VU221E**
C 466, 468, 566, 568	**ECEA1EU101B**
C 467, 567, 718	**ECEA1HU221E**
C 469, 470, 569, 570	**ECQV1H334JZ3**
C 472, 572, 710	**ECEA1EU330**
C 475, 476, 575, 576	**ECEA1EU222**
C 477, 577	**ECEA1EU100B**
C 490, 590	**ECKT1H472MD**
C 564	**ECEA1VU221B**
C 601	**ECQV1H154JZ**
C 602	**ECFT1C333MD**
C 605	**RCBS1C822NYY**
C 608	**RCBS1C222MX**
C 611, 613	**RCBS1H681KB**
C 614	**RCBS1H151KB**
C 617	**ECEA1CU471B**
C 701, 714, 715, 716, 717, 720, 721	**ECKT1H103ZF**
C 702, 703, 723	**ECEA1CU101B**
C 711	**ECEA1HU471E**
C 712, 713	**ECEA1HU222E**
C 719	**ECEA1EU220B**
C 722	**ECEA1HU101B**
C 750	**ECKT1H103MD**
C 800, 802	**ECEA1HN010S**
C 801, 803	**ECEA1HN4R7S**
RESISTORS	
R 2	**ERDS2TJ473T**
R 3	**ERDS2TJ330**
R 4, 7, 13	**ERDS2TJ101T**
R 5, 14	**ERDS2TJ224T**
R 6, 20	**ERDS2TJ221**
R 8	**ERDS2TJ471**
R 9	**ERDS2TJ824T**
R 11, 12, 18, 30, 32	**ERDS2TJ470T**
R 17, 28	**ERDS2TJ222**
R 19	**ERDS2TJ393**
R 21, 22, 24, 25	**ERDS2TJ562T**
R 26	**ERDS2TJ102**
R 27	**ERDS2TJ821T**
R 29, 33, 34	**ERDS2TJ682T**
R 31	**ERDS2TJ331**
R 101, 201	**ERDS2TJ100**
R 102, 122, 131, 202, 222, 231, 325, 332, 341, 344, 345, 359, 361, 362, 363, 364, 365, 366, 368, 372, 383, 804, 809, 814, 819, 820, 821, 822, 826, 843	**ERDS2TJ472**
R 103, 203, 350	**ERDS2TJ392T**
R 104, 204, 369, 370, 374, 376	**ERDS2TJ104T**
R 105, 120, 205, 220, 308, 310, 311, 320, 324, 329, 342, 351, 382, 834, 841, 842	**ERDS2TJ222**
R 106, 206	**ERDS2TJ330**
R 108, 208, 835, 836, 837, 838, 839	**ERDS2TJ331**
R 109, 209, 323	**ERDS2TJ221**
R 110, 115, 210, 215	**ERDS2TJ153T**
R 111, 211	**ERDS2TJ684**
R 112, 212	**ERDS2TJ821T**
R 113, 118, 132, 213, 218, 232, 306, 348	**ERDS2TJ332**
R 121, 134, 141, 221, 234, 241, 303, 315, 318, 330, 335, 336, 339, 340, 347, 367, 377, 379, 380, 805, 813, 818, 825, 844, 845, 846, 847, 848, 849, 850, 851	**ERDS2TJ103T**
R 123, 223, 301, 309, 828, 831	**ERDS2TJ105T**
R 124, 224, 346	**ERDS2TJ272T**
R 142, 242, 305	**ERDS2TJ680T**
R 302, 352, 371	**ERDS2TJ101T**
R 304	**ERDS2TJ474**
R 313, 343	**ERDS2TJ1R0**
R 319, 333, 373, 815, 816	**ERDS2TJ333**
R 321, 823	**ERDS2TJ681**
R 328	**ERDS2TJ154T**
R 331, 353, 802	**ERDS2TJ471**
R 349, 360	**ERDS2TJ682T**
R 354	**ERDS2TJ751T**
R 375	**ERDS2TJ334T**
R 401, 454, 501, 554	**ERDS2TJ562T**
R 402, 480, 492, 502, 580, 592, 743	**ERDS2TJ333**
R 411, 511	**ERDS2TJ222**
R 451, 551	**ERDS2TJ473T**
R 452, 552	**ERDS2TJ683**
R 453, 461, 553, 561	**ERDS2TJ152T**
R 455, 457, 493, 555, 557, 593, 715, 740, 741, 742	**ERDS2TJ103T**
R 456, 556, 731	**ERDS2TJ104T**
R 458, 558	**ERDS2TJ474**
R 459, 477, 559, 577, 703, 721	**ERDS2TJ102**
R 462, 463, 562, 563, 716	**ERDS2TJ472**
R 464, 476, 564, 576	**ERDS2TJ223T**
R 465, 471, 565, 571, 701	**ERDS2TJ101T**
R 466, 475, 566, 575	**ERDS2TJ330**
R 467, 472, 473, 479, 567, 572, 573, 579	**ERDS2TJ332**
R 468, 469, 568, 569	**ERF5AJ101H**
R 470, 474, 570, 574	**ERX1ANJP1R0S**
R 478, 578	**ERD25VJ181T**
R 490, 590	**ERX2ANJPR22S**
R 491, 591	**ERDS2TJ221**
R 494, 594	**ERDS2TJ182T**
R 601, 605, 609, 613, 617 (X)	**ERD25V470T**
R 602, 604, 606, 608, 610, 612, 614, 616, 618, 620	**ERDS2TJ103T**
R 603, 607, 611, 615, 619	**ERDS2TJ104T**
R 621	**ERDS2TJ220T**
R 622	**ERDS2TJ102**
R 623	**ERDS2TJ474**
R 624, 625	**ERDS2TJ473T**
R 626, 629	**ERDS2TJ331**
R 627	**ERDS2TJ472**
R 628	**ERDS2TJ221**
R 717 (X)	**ERG1ANJP561S**
R 717 (XC)	**ERG3SJ561H**
R 718 (X)	**ERG2ANJP270**
R 718 (XC)	**ERF5AJ270H**
R 719 (X)	**ERDS2TJ470T**
R 719 (XC)	**ERG1ANJP470S**
R 720, 730	**ERDS2TJ222**
R 852, 853	**ERD25VJ473**

Ref. No.	Part No.	Part Name & Description
INTEGRATED CIRCUITS		
IC 1	**AN7205**	IC (FM FRONT END)
IC 2	**BA4236L**	IC (FM/AM IF AMP, DET, AM OSC, MIX)
IC 3	**RViBA1332L**	IC (FM MPX)
IC 301	**BA3416BL**	IC (EQ/PRE AMP)
IC 302	**RViLM1131C**	IC (DOLBY NR AMP)
IC 303	**RViBA338**	IC (TPS DRIVE)
IC 304	**TC9312N018**	IC (TAPE 1 MECHANISM CONTROL)
IC 305	**TC9312N017**	IC (TAPE 2 MECHANISM CONTROL)
IC 451, 551	**STK4311N**	IC (POWER AMP)
IC 601, 602	**BA3822LS**	IC (GRAPHIC EQ AMP)
IC 603, 604, 605, 606, 607	**LB1403N**	IC (S. ANALYZER LED DRIVE)
IC 701	**RViBA328MR**	IC (PHNO AMP)
TRANSISTORS		
Q 1	**2SC1359BTA**	Transistor (FM IF AMP)
Q 2	**2SC1684RTA**	Transistor (REGULATOR)
Q 101, 105, 106, 107, 108, 109, 111, 112, 113, 115, 116, 201, 205, 206, 207, 208, 209, 211, 212, 213, 215, 216, 304, 305, 306, 307, 308, 309, 311, 313, 314, 317, 323, 324, 326, 327, 330, 333, 335, 336, 337, 338, 339, 342, 344, 345, 346, 348, 351, 353, 354, 356	**2SC3311RTA**	Transistor (MUTING, SWITCHING, etc.)
Q 102, 122, 202, 222	**2SD1450RTA**	Transistor (MUTING, SWITCHING)
Q 103, 203, 302, 312	**2SC1845FTA**	Transistor (REC/PLAY SELECTOR, BEAT PROOF)
Q 104, 114, 118, 119, 120, 121, 204, 214, 218, 219, 220, 221, 329, 340	**RVTDTC114TS**	Transistor (MUTING, SWITCHING, etc.)
Q 110, 210, 321, 357	**RVTDTC143TST**	Transistor (MUTING, TPS DRIVE, etc.)
Q 117, 217, 301	**2SC3312STA**	Transistor (REC/PLAY AMP, MIC AMP)
Q 303, 328, 334, 341	**2SA1309RTA**	Transistor (SWITCHING, DRIVE)
Q 315, 316	**2SD1468SRSTP**	Transistor (BIAS OSC)
Q 320	**2SC1846R**	Transistor (REGULATOR)
Q 322, 332	**RVTDTC143XST**	Transistor (MUTING DRIVE, REC/PLAY SELECTOR)
Q 325	**2SC1740SR**	Transistor (REC/PLAY SELECTOR)
Q 331	**RVTDTA143XS**	Transistor (REC/PLAY SELECTOR)
Q 343, 350	**2SB941**	Transistor (REGULATOR)
Q 347, 349	**2SK381CDTA**	Transistor (TAPE SPEED CONTROL)
Q 352	**2SD1302**	Transistor (REGULATOR)
Q 355	**RVTDTA114TS**	Transistor (SWITCHING)
Q 451, 551, 701	**2SC1740SR**	Transistor (PRE AMP, FILTER)
Q 452, 552	**2SD1450RTA**	Transistor (MUTING)
Q 601	**2SC1740SR**	Transistor (S. ANALYZER AMP)
Q 710	**2SA1309ARTA**	Transistor (PROTECTOR)
Q 711, 712, 713	**2SC3311ARTA**	Transistor (PROTECTOR)
DIODES & RECTIFIERS		
D 1, 3, 5	**RVD1SS133**	Diode (AGC, PROTECTOR)
D 2	**MA840B**	Diode (AFC)
D 4	**RVDMTZ6R8B**	Diode (REGULATOR)
D 6, 7	**LN021309P1**	LED (TUNING, FM STEREO IND)
D 101, 102, 201, 202, 301, 302, 303, 304, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 324, 325, 326, 328, 329, 330, 331, 334, 335, 336, 337, 338, 339, 340, 341, 343, 345, 347, 348, 349, 351, 352, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372	**RVD1SS133**	Diode (SWITCHING, REVERSE CURRENT BLOCKING, etc.)
D 305	**RVDP300D**	Diode (VOLTAGE PROTECTOR)
D 307, 308, 309, 310	**RVDERA1502TA**	Diode (RECTIFIER)
D 311	**RVDMTZ10B**	Diode (REGULATOR)
D 312	**LN217RPLSCF**	LED (POWER/BATT IND)
D 323	**RVDMTZ13ATA**	Diode (REGULATOR)
D 333	**RVDMTZ6R2BTA**	Diode (REGULATOR)
D 342	**RVDMTZ15BTA**	Diode (REGULATOR)
D 346	**RVDMTZ8R2B**	Diode (REGULATOR)
D 354, 356, 357	**LN031310P1**	LED (REV, REC, FWD IND: TAPE 1)
D 358, 359	**LN023309P**	LED (REV, FWD IND: TAPE 2)
D 373 (XC)	**RVDMTZ13ATA**	Diode (REGULATOR)
D 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629	**RVDSLZ281PBT**	LED (S. ANALYZER IND)
D 630, 631, 632 (XC)	**RVD1SR35**	Diode (PROTECTOR)
D 705	**MA4039M**	Diode (PROTECTOR)
D 706, 707, 708, 709	**RVDS5VB10**	Diode (DECTIFIER)
D 710, 711	**RVD1SR35**	Diode (RECTIFIER)
D 717, 718, 719, 720	**RVD1SS133**	Diode (RECTIFIER)
COILS		
L 1	**RLQY30S4**	Choke Coil
L 2	**RLD4Y44**	Coil, FM ANT
L 3	**RLD4Y43**	Coil, FM OSC
L 4, 5	**RLF5D21**	Coil, MW/SW1 ANT
L 6	**RLA3B44**	Coil, SW2 ANT.
L 7	**RL02B108**	Coil, FM OSC
L 8	**RL03B91**	Coil, SW1 OSC
L 9	**RL03B90**	Coil, SW2 OSC
L 10	**RLQZB101K**	Choke Coil
L 101, 201	**RLQZM473J**	Choke Coil
L 102, 202	**RLQZB822K**	Choke Coil
L 301	**RLQZB470K**	Choke Coil
L 451, 551	**RLE5031**	Coil, Filter
TRANSFORMERS		
T 1, 3	**RLi4B153**	IFT, FM 1st, 2nd
T 2	**RLi2B153**	IFT, AM
T 101, 201	**RLE9B10-K**	Filter
T 301	**RL08C4**	Coil, Bias OSC
T 302 (X)	**RLT5Z5G1A**	Power Transformer ⚠
T 302 (XC)	**RLT5Z5G1B-W**	Power Transformer ⚠
VARIABLE CAPACITORS		
VC 1, 2, 3, 4 (CT1, 2, 3, 6)	**RCV4RC2RA**	Variable Capacitor/with Trimmer Capacitor
VC 5	**RCVMFTPC17**	Fine Tuning
TRIMMER CONDENSERS		
CT 4	**RCVPL5A**	Trimmer Capacitor
CT 5	**RCVPL10A**	Trimmer Capacitor
CT 7	**RCV2PL10A**	Trimmer Capacitor
VARIABLE RESISTORS		
VR 1	**EVND4AA00B14**	FM VCO Adjustment VR, 10k (B)
VR 101, 102, 201, 202	**EVND4AA00B23**	Playback Gain Adjustment VR, 2k (B)
VR 103, 104, 203, 204	**EVND4AA00B15**	Bias Current, Overall Gain Adjustment VR, 100k (B)
VR 301	**EVND4AA00B24**	Erase Frequency Adjustment VR, 20k (B)
VR 302, 304	**EVND1AA00B14**	High Tape Speed Adjustment VR, 10k (B)
VR 303, 305	**EVND1AA00B24**	Normal Tape Speed Adjustment VR, 20k (B)
VR 306	**EWAMF0X05B54**	Mixing Level Control VR, 50k (B)
VR 401, 402, 403, 404, 405, 406, 407, 501, 502, 503, 504, 505, 506, 507	**EWASA2C95G54**	G. EQUALIZER CONTROL VR, 50k (G)
VR 451, 551	**EWAPA3X05B54**	Volume Control VR, 50k (B)
VR 701	**EWAMF1X05G54**	Balance Control VR, 50k (G)
CERAMIC FILTERS		
CF 1	**RVF107WDZ**	Cermamic Filter (10.7MHz)
CF 2	**RVFSFZ455JL**	Ceramic Filter (455kHz)
THERMISTOR		
TH 301	**RRT202**	Thermistor

Ref. No.	Part No.	Part Name & Description
FILTER		
Z 1	**RXABPMB6AT**	Comp
PLUNGER		
PL 1, 2	**XAMR74S17A**	Pilot
FUSES		
F 1, 2	**XBA2C12TB0U**	Fuse,
F 5 (XC)	**XBA2C016SB0U**	Fuse,
SWITCHE		
S 1-1	**ESB8213**	Push
S 1-2	**RSH1A66Z**	Push
S 2	**ESB71402**	Push Selec

S LIST

F
e Peculiarity

	Tolerance
H : 500V DC	K : ±10%
: 25V DC	M : ±20%
	Z : +80% −20%
	J : ±5%
	G : ±2%
: 100WV DC	F : ±1%
	C : ±0.25pF
: 6.3V	D : ±0.5pF
: 16V	F : ±1pF
: 35V	
: 63V	

	Ref. No.	Part No.
1B	R 31	ERDS2TJ331
E	R 101, 201	ERDS2TJ100
B	R 102, 122, 131, 202, 222, 231,	
IE	325, 332, 341, 344, 345, 359,	
IZ3	361, 362, 363, 364, 365, 366,	
	368, 372, 383, 804, 809, 814,	
DB	819, 820, 821,	
MD	822, 826, 843	ERDS2TJ472
B	R 103, 203, 350	ERDS2TJ392T
IZ	R 104, 204, 369,	
ID	370, 374, 376	ERDS2TJ104T
IYY	R 105, 120, 205,	
MX	220, 308, 310,	
KB	311, 320, 324,	
KB	329, 342, 351,	
B	382, 834, 841, 842	ERDS2TJ222
F	R 106, 206	ERDS2TJ330
B	R 108, 208, 835, 836, 837, 838,	
E	839	ERDS2TJ331
RE		
B	R 109, 209, 323	ERDS2TJ221
B	R 110, 115, 210, 215	ERDS2TJ153T
ID	R 111, 211	ERDS2TJ684
OS	R 112, 212	ERDS2TJ821T
7S	R 113, 118, 132, 213, 218, 232, 306, 348	ERDS2TJ332
T		
T	R 121, 134, 141, 221, 234, 241,	
T	303, 315, 318, 330, 335, 336,	
	339, 340, 347,	
T	367, 377, 379,	
	380, 805, 813,	
T	818, 825, 844,	
	845, 846, 847,	
	848, 849, 850, 851	ERDS2TJ103T
T		
	R 123, 223, 301,	
T	309, 828, 831	ERDS2TJ105T
T	R 124, 224, 346	ERDS2TJ272T

Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.
R 125, 225, 355	ERDS2TJ151T	R 142, 242, 305	ERDS2TJ680T	R 451, 551	ERDS2TJ473T	R 466, 475, 566,		R 603, 607, 611,	
R 126, 226, 326	ERDS2TJ683	R 302, 352, 371	ERDS2TJ101T	R 452, 552	ERDS2TJ683	575	ERDS2TJ330	615, 619	ERDS2TJ104T
R 128, 228	ERDS2TJ122T	R 304	ERDS2TJ474	R 453, 461, 553,		R 467, 472, 473,		R 621	ERDS2TJ220T
R 129, 229	ERDS2TJ274	R 313, 343	ERDS2TJ1R0	561	ERDS2TJ152T	479, 567, 572,		R 622	ERDS2TJ102
R 130, 230	ERDS2TJ473T	R 319, 333, 373,		R 455, 457, 493,		573, 579	ERDS2TJ332	R 623	ERDS2TJ474
R 133, 233, 378	ERDS2TJ822	815, 816	ERDS2TJ333	555, 557, 593,				R 624, 625	ERDS2TJ473T
R 135, 235	ERDS2TJ182T	R 321, 823	ERDS2TJ681	715, 740, 741,		R 468, 469, 568,		R 626, 629	ERDS2TJ331
R 136, 140, 236,		R 328	ERDS2TJ154T	742	ERDS2TJ103T	569	ERF5AJ101H	R 627	ERDS2TJ472
240, 337, 338,		R 331, 353, 802	ERDS2TJ471			R 470, 474, 570,		R 628	ERDS2TJ221
829, 830, 832,				R 456, 556, 731	ERDS2TJ104T	574	ERX1ANJP1R0S	R 717 (X)	ERG1ANJP561S
833	ERDS2TJ223T	R 349, 360	ERDS2TJ682T	R 458, 558	ERDS2TJ474	R 478, 578	ERD25VJ181T	R 717 (XC)	ERG3SJ561H
		R 354	ERDS2TJ751T	R 459, 477, 559,		R 490, 590	ERX2ANJPR22S		
R 137, 237, 312,		R 375	ERDS2TJ334T	577, 703, 721	ERDS2TJ102	R 491, 591	ERDS2TJ221	R 718 (X)	ERG2ANJP270
316, 317, 322,		R 401, 454, 501,		R 462, 463, 562,		R 494, 594	ERDS2TJ182T	R 718 (XC)	ERF5AJ270H
334, 357, 385,		554	ERDS2TJ562T	563, 716	ERDS2TJ472	R 601, 605, 609,		R 719 (X)	ERDS2TJ470T
801, 803, 806,		R 402, 480, 492,		R 464, 476, 564,		613, 617 (X)	ERD25V470T	R 719 (XC)	ERG1ANJP470S
810, 824, 840	ERDS2TJ102	502, 580, 592,		576	ERDS2TJ223T	R 602, 604, 606,		R 720, 730	ERDS2TJ222
		743	ERDS2TJ333	R 465, 471, 565,		608, 610, 612,		R 852, 853	ERD25VJ473
R 138, 238	ERDS2TJ562T			571, 701	ERDS2TJ101T	614, 616, 618,			
R 139, 239, 314	ERDS2TJ152T	R 411, 511	ERDS2TJ222			620	ERDS2TJ103T		

Ref. No.	Part No.	Part Name & Description
INTEGRATED CIRCUITS		
IC 1	AN7205	IC (FM FRONT END)
IC 2	BA4236L	IC (FM/AM IF AMP, DET, AM OSC, MIX)
IC 3	RViBA1332L	IC (FM MPX)
IC 301	BA3416BL	IC (EQ/PRE AMP)
IC 302	RViLM1131C	IC (DOLBY NR AMP)
IC 303	RViBA338	IC (TPS DRIVE)
IC 304	TC9312N018	IC (TAPE 1 MECHANISM CONTROL)
IC 305	TC9312N017	IC (TAPE 2 MECHANISM CONTROL)
IC 451, 551	STK4311N	IC (POWER AMP)
IC 601, 602	BA3822LS	IC (GRAPHIC EQ AMP)
IC 603, 604, 605, 606, 607	LB1403N	IC (S. ANALYZER LED DRIVE)
IC 701	RViBA328MR	IC (PHNO AMP)
TRANSISTORS		
Q 1	2SC1359BTA	Transistor (FM IF AMP)
Q 2	2SC1684RTA	Transistor (REGULATOR)
Q 101, 105, 106, 107, 108, 109, 111, 112, 113, 115, 116, 201, 205, 206, 207, 208, 209, 211, 212, 213, 215, 216, 304, 305, 306, 307, 308, 309, 311, 313, 314, 317, 323, 324, 326, 327, 330, 333, 335, 336, 337, 338, 339, 342, 344, 345, 346, 348, 351, 353, 354, 356	2SC3311RTA	Transistor (MUTING, SWITCHING, etc.)
Q 102, 122, 202, 222	2SD1450RTA	Transistor (MUTING, SWITCHING)
Q 103, 203, 302, 312	2SC1845FTA	Transistor (REC/PLAY SELECTOR, BEAT PROOF)
Q 104, 114, 118, 119, 120, 121, 204, 214, 218, 219, 220, 221, 329, 340	RVTDTC114TS	Transistor (MUTING, SWITCHING, etc.)
Q 110, 210, 321, 357	RVTDTC143TST	Transistor (MUTING, TPS DRIVE, etc.)
Q 117, 217, 301	2SC3312STA	Transistor (REC/PLAY AMP, MIC AMP)
Q 303, 328, 334, 341	2SA1309RTA	Transistor (SWITCHING, DRIVE)
Q 315, 316	2SD1468SRSTP	Transistor (BIAS OSC)
Q 320	2SC1846R	Transistor (REGULATOR)
Q 322, 332	RVTDTC143XST	Transistor (MUTING DRIVE, REC/PLAY SELECTOR)
Q 325	2SC1740SR	Transistor (REC/PLAY SELECTOR)
Q 331	RVTDTA143XS	Transistor (REC/PLAY SELECTOR)
Q 343, 350	2SB941	Transistor (REGULATOR)
Q 347, 349	2SK381CDTA	Transistor (TAPE SPEED CONTROL)
Q 352	2SD1302	Transistor (REGULATOR)

Ref. No.	Part No.	Part Name & Description
Q 355	RVTDTA114TS	Transistor (SWITCHING)
Q 451, 551, 701	2SC1740SR	Transistor (PRE AMP, FILTER)
Q 452, 552	2SD1450RTA	Transistor (MUTING)
Q 601	2SC1740SR	Transistor (S. ANALYZER AMP)
Q 710	2SA1309ARTA	Transistor (PROTECTOR)
Q 711, 712, 713	2SC3311ARTA	Transistor (PROTECTOR)
DIODES & RECTIFIERS		
D 1, 3, 5	RVD1SS133	Diode (AGC, PROTECTOR)
D 2	MA840B	Diode (AFC)
D 4	RVDMTZ6R8B	Diode (REGULATOR)
D 6, 7	LN021309P1	LED (TUNING, FM STEREO IND)
D 101, 102, 201, 202, 301, 302, 303, 304, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 324, 325, 326, 328, 329, 330, 331, 334, 335, 336, 337, 338, 339, 340, 341, 343, 345, 347, 348, 349, 351, 352, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372	RVD1SS133	Diode (SWITCHING, REVERSE CURRENT BLOCKING, etc.)
D 305	RVDP300D	Diode (VOLTAGE PROTECTOR)
D 307, 308, 309, 310	RVDERA1502TA	Diode (RECTIFIER)
D 311	RVDMTZ10B	Diode (REGULATOR)
D 312	LN217RPLSCF	LED (POWER/BATT IND)
D 323	RVDMTZ13ATA	Diode (REGULATOR)
D 333	RVDMTZ6R2BTA	Diode (REGULATOR)
D 342	RVDMTZ15BTA	Diode (REGULATOR)
D 346	RVDMTZ8R2B	Diode (REGULATOR)
D 354, 356, 357	LN031310P1	LED (REV, REC, FWD IND: TAPE 1)
D 358, 359	LN023309P	LED (REV, FWD IND: TAPE 2)
D 373 (XC)	RVDMTZ13ATA	Diode (REGULATOR)
D 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629	RVDSLZ281PBT	LED (S. ANALYZER IND)
D 630, 631, 632 (XC)	RVD1SR35	Diode (PROTECTOR)
D 705	MA4039M	Diode (PROTECTOR)
D 706, 707, 708, 709	RVDS5VB10	Diode (DECTIFIER)
D 710, 711	RVD1SR35	Diode (RECTIFIER)
D 717, 718, 719, 720	RVD1SS133	Diode (RECTIFIER)
COILS		
L 1	RLQY30S4	Choke Coil
L 2	RLD4Y44	Coil, FM ANT
L 3	RLD4Y43	Coil, FM OSC
L 4, 5	RLF5D21	Coil, MW/SW1 ANT
L 6	RLA3B44	Coil, SW2 ANT.

Ref. No.	Part No.	Part Name & Description
L 7	RL02B108	Coil, FM OSC
L 8	RL03B91	Coil, SW1 OSC
L 9	RL03B90	Coil, SW2 OSC
L 10	RLQZB101K	Choke Coil
L 101, 201	RLQZM473J	Choke Coil
L 102, 202	RLQZB822K	Choke Coil
L 301	RLQZB470K	Choke Coil
L 451, 551	RLE5031	Coil, Filter
TRANSFORMERS		
T 1, 3	RLI4B153	IFT, FM 1st, 2nd
T 2	RLI2B153	IFT, AM
T 101, 201	RLE9B10-K	Filter
T 301	RL08C4	Coil, Bias OSC
T 302 (X)	RLT5Z5G1A	Power Transformer ⚠
T 302 (XC)	RLT5Z5G1B-W	Power Transformer ⚠
VARIABLE CAPACITORS		
VC 1, 2, 3, 4 (CT1, 2, 3, 6)	RCV4RC2RA	Variable Capacitor/with Trimmer Capacitor
VC 5	RCVMFTPC17	Fine Tuning
TRIMMER CONDENSERS		
CT 4	RCVPL5A	Trimmer Capacitor
CT 5	RCVPL10A	Trimmer Capacitor
CT 7	RCV2PL10A	Trimmer Capacitor
VARIABLE RESISTORS		
VR 1	EVND4AA00B14	FM VCO Adjustment VR, 10k (B)
VR 101, 102, 201, 202	EVND4AA00B23	Playback Gain Adjustment VR, 2k (B)
VR 103, 104, 203, 204	EVND4AA00B15	Bias Current, Overall Gain Adjustment VR, 100k (B)
VR 301	EVND4AA00B24	Erase Frequency Adjustment VR, 20k (B)
VR 302, 304	EVND1AA00B14	High Tape Speed Adjustment VR, 10k (B)
VR 303, 305	EVND1AA00B24	Normal Tape Speed Adjustment VR, 20k (B)
VR 306	EWAMF0X05B54	Mixing Level Control VR, 50k (B)
VR 401, 402, 403, 404, 405, 406, 407, 501, 502, 503, 504, 505, 506, 507	EWASA2C95G54	G. EQUALIZER CONTROL VR, 50k (G)
VR 451, 551	EWAPA3X05B54	Volume Control VR, 50k (B)
VR 701	EWAMF1X05G54	Balance Control VR, 50k (G)
CERAMIC FILTERS		
CF 1	RVF107WDZ	Cermamic Filter (10.7MHz)
CF 2	RVFSFZ455JL	Ceramic Filter (455kHz)
THERMISTOR		
TH 301	RRT202	Thermistor

Ref. No.	Part No.	Part Name & Description
FILTER		
Z 1	RXABPMB6AT	Components Combination
PLUNGERS		
PL 1, 2	XAMR74S17A	Pilot Lamp
FUSES		
F 1, 2	XBA2C12TB0U	Fuse, T1.25A ⚠
F 5 (XC)	XBA2C016SB0U	Fuse, T160mA ⚠
SWITCHES		
S 1-1	ESB8213	Push Switch, AC Power ⚠
S 1-2	RSH1A66Z	Push Switch, DC Power
S 2	ESB71402	Push Switch, Power Source Selector
S 3	RSR3A01Z	Rotary SWitch, Voltage Selector ⚠
S 4	RSS2A22Z	Slide Switch, Beat Proof
S 5	RSS4B03Z	Slide Switch, Reverse Mode
S 6	ESB62771	Push Switch, Dolby NR
S 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	EVQQFR02K	Switch, Operation
S 201, 202, 203, 204, 205, 206	ESB621616	Push Switch, Band, FM Mode, Muting
S 217, 218, 219, 220, 221	ESB621615	Push Switch, Function, Muting
S 901, 951	RSH1B12Z	Leaf Switch (FF/REW, PLAY)
S 902, 952, 953, 954, 955	RSH1A46Z	Leaf Switch (REV/FWD REC, ATS)
JACKS		
J 1	RJF1100Y	Jack, LINE OUT (L)
J 2	RJF1100Z	Jack, LINE OUT (R)
J 3	RJJD3M3Z	Jack, MIX MIC/MIC
J 4, 5 (X)	RJJ1F1Y	Jack, AC/DC IN ⚠
J 4, 5 (XC)	RJJ1F3ZC-H	Jack, AC/DC IN ⚠
J 7	RJJ1E9Y	Jack, Headphone
J 8, 9, 10, 11	RJF1099Z	Jack, Phono, CD/LINE IN
J 12, 13	QJT1104	Terminal, Speaker

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